

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF TEXAS  
DALLAS DIVISION**

FEDERAL TRADE COMMISSION,

Plaintiff,

vs.

MATCH GROUP, INC., a corporation, and  
MATCH GROUP, LLC, formerly known as  
MATCH.COM, LLC, a limited liability  
company,

Defendants.

Case No. 3:19-cv-02281-K

**APPENDIX IN SUPPORT OF DEFENDANTS RESPONSE TO PLAINTIFF MOTION IN  
LIMINE TO EXCLUDE PROPOSED EXPERT TESTIMONY OF BRANDON WARD**

Defendants, by and through their counsel, submit this Appendix in support of their Response to Plaintiff's Motion in Limine to Exclude Proposed Expert Testimony of Brandon Ward.

No.	Description	App. Page(s)
1.	Brandon Ward Deposition Transcript Excerpts	APP 0001-APP 0022
2.	Article: How to Conduct Heuristic Evaluations	APP 0023-APP 0024
3.	FTC Proposed Rule	APP 0025-APP 0107
4.	Dr. Jennifer King Expert Report	APP 0108-APP 0181
5.	Usability 101: Introduction to Usability	APP 0182-APP 0186
6.	Dr. Jennifer King's Notes: "Match brainstorming"	APP 0187-APP 0202
7.	Dr. Jennifer King's Consulting and Litigation	APP 0203-APP 0204
8.	Dr. Jennifer King Deposition Transcript Excerpts	APP 0205-APP 0209
9.	Reference Guide on Survey Research by S. Diamond	APP 0210-APP 0274.
10.	Brandon Ward Deposition Exhibit 9	APP 0275

No.	Description	App. Page(s)
11.	Brandon Ward Report, Appendix L, Session Details tab, Row 13	APP 0276
12.	MATCHFTC555823	APP 0277-APP 0311
13.	Brandon Ward Report, Appendix L, Task Time Tab, Row 85	APP 0312
14.	Rebuttal Expert Report of Brandon Ward	APP 0313-APP 0370
15.	Dushyant Saraph Deposition Transcript Excerpts	APP 0371-APP 0374
16.	MIME program overview at the University of Indiana	APP 0375
17.	T605: Usability Engineering for entertainment applications	APP 0376-APP 0380
18.	SMU User-Experience Design Instructors	APP 0381-APP 0384
19.	Usability.gov - Interaction Design Basics	APP 0385-APP 0386

Dated: October 2, 2023

/s/ Angela C. Zambrano

---

Angela C. Zambrano  
State Bar No. 24003157  
[angela.zambrano@sidley.com](mailto:angela.zambrano@sidley.com)  
Chelsea A. Priest  
State Bar No. 24102375  
[cpriest@sidley.com](mailto:cpriest@sidley.com)  
Tayler G. Bragg  
State Bar No. 24109943  
[tbragg@sidley.com](mailto:tbragg@sidley.com)  
SIDLEY AUSTIN LLP  
2021 McKinney Avenue, Suite 2000  
Dallas, TX 75201  
Telephone: 214-981-3300  
Fax: 214-981-3400

Chad S. Hummel (admitted *pro hac vice*)  
[chummel@sidley.com](mailto:chummel@sidley.com)  
SIDLEY AUSTIN LLP  
1999 Avenue of the Stars, 17th Floor  
Los Angeles, CA 90067  
Telephone: 310-595-9500  
Fax: 310-595-9501

Benjamin M. Mundel (admitted *pro hac vice*)  
[bmundel@sidley.com](mailto:bmundel@sidley.com)  
SIDLEY AUSTIN LLP  
1501 K Street, N.W.  
Washington, DC 20005  
Telephone: 202-736-8000  
Fax: 202-736-8711

*Attorneys for Match Group, Inc. and  
Match Group, LLC*

**CERTIFICATE OF SERVICE**

I hereby certify that on October 2, 2023, I caused a true and correct copy of the above and foregoing document, to be served on all counsel of record in accordance with the Federal Rules of Civil Procedure and this Court's CM/ECF filing system.

*/s/ Angela C. Zambrano*  
Angela C. Zambrano

**In the Matter of:**

**FTC v. Match Group, Inc., et al.**

*July 13, 2023  
Brandon Ward*

**Condensed Transcript with Word Index**



For The Record, Inc.  
(301) 870-8025 - [www.ftrinc.net](http://www.ftrinc.net) - (800) 921-5555

1 IN THE UNITED STATES DISTRICT COURT  
2 NORTHERN DISTRICT OF TEXAS  
3 FEDERAL TRADE COMMISSION, )  
4 Plaintiff, )  
5 v. )  
6 MATCH GROUP, INC., a )  
corporation, and MATCH )  
7 GROUP, LLC, formerly known )  
as MATCH.COM, LLC, a )  
8 limited liability company, )  
9 Defendants. )  
 ) CASE ACTION NO.  
 ) 3:19-cv-02281-K

ORAL DEPOSITION OF

BRANDON WARD

JULY 13, 2023

16 ORAL DEPOSITION OF BRANDON WARD, produced as a  
17 witness at the instance of the Plaintiff, and duly  
18 sworn, was taken in the above-styled and numbered cause  
19 on July 13, 2023, from 9:01 a.m. to 6:17 p.m. before  
20 Brent Sturgess, CSR in and for the State of Texas,  
21 reported by machine shorthand at the law offices of  
22 Sidley Austin LLP, 2021 McKinney Avenue, Suite 2000,  
23 Dallas, Texas, 75201, pursuant to Notice, the Federal  
24 Rules of Civil Procedure and the provisions stated on  
25 the record or attached hereto.

1 A P P E A R A N C E S  
2  
3 COUNSEL FOR THE PLAINTIFF:  
4 M. Hasan Ajiaz, Esq.  
Reid Tepfer, Esq.  
5 UNITED STATES FEDERAL TRADE COMMISSION  
1999 Bryan Street, Suite 2150  
6 Dallas, Texas 75201  
214.979.9386  
7 maijaz@ftc.gov  
rtepfer@ftc.gov  
8  
9 COUNSEL FOR THE DEFENDANTS:  
10 Chad S. Hummel, Esq.  
SIDLEY AUSTIN LLP  
11 1999 Avenue of the Stars, 17th Floor  
Los Angeles, California 90067  
12 310.595.9505  
chummel@sidley.com  
13  
14 Angela C. Zambrano, Esq.  
Chelsea Priest, Esq. (via Zoom)  
SIDLEY AUSTIN LLP  
15 2021 McKinney Avenue, Suite 2000  
Dallas, Texas 75201  
214.981.3300  
16 angela.zambrano@sidley.com  
cpriest@sidley.com  
17  
18  
19  
20  
21  
22 Witness: Brandon Ward  
23 Also Present: Samuel Kitchens  
Katie Johnson (via Zoom)  
Jeanette Teckman (via Zoom)  
24 Court Reporter: Brent Sturgess, CSR  
25

T N D E X

INDEX			PAGE
2	Appearances.....		3
4	BRANDON WARD		
5	Examination by Mr. Ajiaz.....		4
6	Examination by Mr. Hummel.....		333
7	Signature and Changes.....		334
8	Reporter's Certificate.....		336
9	EXHIBITS		
10	NUMBER	DESCRIPTION	PAGE
11	1	Expert Report of Brandon Ward Regarding Match.com's Online Subscription Cancellation Flow, 01-13-23.....	7
12	2	Articles.....	17
13	3	Nielsen Norman Group - Heuristic Evaluation Workbook.....	55
14	4	Articles.....	58
15	5	What is a Good Task Completion Rate?.....	73
16	6	Video.....	135
17	7	Customer Satisfactory Survey - July 2015.	173
18	8	Video.....	213
19	9	2013 - Current.....	244
20	10	Rebuttal of Dr. King's Report Regarding Match.com's Online Subscription Cancellation Flow.....	286
21	11	Matchweb - 4390.....	301
22	Note:	Exhibit Numbers 6 and 8 are videos that were produced by counsel and remained in the possession of counsel.	

THE REPORTER: Mr. Ward, would you  
please raise your right hand and be sworn?

THE WITNESS: (Witness complies.)

THE REPORTER: Do you solemnly swear or affirm that the testimony you will give in this matter will be the truth, the whole truth and nothing but the truth so help you God?

THE WITNESS: Yes.

THE REPORTER: Thank you.

MR. AIJAZ: All right. Thank you.

EXAMINATION

Q. (By Mr. Aijaz) Good morning.

A. Good morning.

MR. AIJAZ: My name is Hasan Aijaz. I'm here representing the Federal Trade Commission. With me is my colleague and friend, Reid Tepfer. And, Counsel, would you please identify yourself for the record?

MR. HUMMEL: Chad Hummel, Sidley Austin, for defendants.

MR. AIJAZ: And could we identify anyone on Zoom?

MR. HUMMEL: Sure. You've got Chelsea Priest, Sidley Austin, and then in-house you've got Katie Johnson, and here with me is Samuel Kitchens.

9

1 A. Yes. As part of my UX team at Precocity,  
 2 they helped me proofread, find any spelling/  
 3 grammatical errors. They helped check and double-  
 4 check calculations. They helped me to go through and  
 5 code results in the usability study, double-check  
 6 citations, things of that nature.

7 Q. Okay. So did -- with respect to coding, did  
 8 they do the coding or did you do the coding?

9 A. They did most of the coding, yes.

10 Q. Did you double-check their coding work?

11 A. I looked through some of it, not all.

12 Q. Okay. We might get back to that later.

13 And just for my understanding, was  
 14 Precocity retained or were you retained for -- to  
 15 create this report?

16 A. I'm not exactly sure how to answer that. I  
 17 am the expert that was retained. However, I am a  
 18 consultant for Precocity. So Precocity, the agency,  
 19 was retained and they are being paid. I'm a salaried  
 20 employee of Precocity, but I am the expert witness.  
 21 My name is on the report. It's my report.

22 Q. Okay. And so for the purposes of the report  
 23 and your involvement in this matter, what is the  
 24 expertise that you're bringing to bear?

25 A. So I have multiple undergrad degrees in --

11

1 design is quite holistic. It encompasses many things  
 2 from varied fields like cognitive psychology, graphic  
 3 design, research and -- and just quite an enumerable  
 4 number of fields. This is a very high-level summary  
 5 of user experience design and -- and web design in  
 6 particular.

7 But service design, like I said,  
 8 information architecture, UI design, graphic design,  
 9 contextual inquiry, heuristics, frameworks. It's  
 10 just -- the list goes on and on.

11 Q. So are you an expert in cognitive  
 12 psychology?

13 A. To some extent where it applies to  
 14 interactive media design.

15 Q. Do you have any degrees in cognitive  
 16 psychology?

17 A. Just my master's degree in -- in -- in  
 18 interactive media design that incorporated some  
 19 studies in cognitive psychology.

20 Q. Do you have a specific cognitive psychology  
 21 degree?

22 A. I do not.

23 Q. Okay. With respect to that, to that  
 24 master's degree you just mentioned, you said it was in  
 25 interactive media?

10

1 in the arts coupled with a master's degree in  
 2 interactive media design coupled with 23 years of  
 3 experience programming, researching, doing information  
 4 architecture design, user research, usability testing,  
 5 user experience design, user interface design and  
 6 front-end development.

7 Around 47,000 hours of work in the  
 8 field for hundreds of projects with about as many  
 9 clients. I've written 25 or so articles, spoken at 18  
 10 various conferences. I teach at SMU and UX in service  
 11 design. I teach workshops. I've attended workshops  
 12 as well, attended conferences, learned and -- and  
 13 taught there as well.

14 Q. Okay. So on Page 4 in this Paragraph 8 of  
 15 your report, you wrote that "I was retained by Sidley  
 16 Austin LLP to use my expertise in website design and  
 17 user experience to evaluate and offer opinions about  
 18 Match.com's online subscription cancellation flow."

19 Focusing on those two areas, website  
 20 design and user experience, are those areas in which  
 21 you have expertise?

22 A. I do have expertise in those areas.

23 Q. Are there any other areas beyond these two  
 24 that you are using your expertise for this matter?

25 A. Yes. The -- the craft of user experience

12

1 A. Interactive media design.

2 Q. Okay. On Page 2, Paragraph 2 of your report  
 3 you say "I received my M.S. in telecommunications from  
 4 Indiana University, Bloomington."

5 A. Uh-huh.

6 Q. Is that the same degree you're referring to?

7 A. Yes. I received my M.S. in  
 8 telecommunications from IU-Bloomington through the  
 9 master's in immersive mediated environments program.  
 10 That's the interactive media design program.

11 Q. Okay. So the degree itself is a  
 12 telecommunications degree; is that right?

13 A. It's under that department.

14 Q. Which department?

15 A. My degree in interactive media design is  
 16 underneath the telecommunications department.

17 Q. Okay. What is the title of the degree  
 18 itself?

19 Master's of science in?

20 A. I believe it's in telecommunications. MIME  
 21 is what the program was called. So everybody who went  
 22 through my program were considered -- MIMEsters was  
 23 the nickname. But because MIME is so ambiguous, we --  
 24 we tend to just say the whole thing out loud.

25 And my shorthand for MIME, master's in

3 (Pages 9 to 12)

13	15
<p>1      immersive mediated environments. Because it 2      encompasses a lot of things, my particular program was 3      focused on interactive media design specifically. 4      <b>Q. Okay. Are you a survey design expert?</b> 5      A. I would say, yes. 6      <b>Q. Okay. And what's the basis for your</b> 7      <b>expertise in survey design?</b> 8      A. Through my 23 years of -- of experience 9      designing and researching websites, I have studied and 10     researched the practice of design, read articles and 11     books, followed examples and frameworks from some of 12     the masters, Jacob Nielsen, Jeff Sauro and -- and 13     their ilk to try to -- to hone my craft, to better 14     research the projects that I had been working on. 15     <b>Q. Do you have any education in survey design?</b> 16     A. As I said, my education comes from workshops 17     and from my -- my master's degree coupled with 18     attending conferences, reading books, attending 19     lectures and -- and learning online. 20     <b>Q. Okay. What conferences did you attend</b> 21     <b>regarding survey design?</b> 22     A. It's tough to answer that question. I've 23     attended a lot of conferences. Some of the 24     conferences I've attended were IXDA, which is the 25     Interaction Design Association conference.</p>	<p>1      <b>Q. Okay. Any published books?</b> 2      A. I have not written any published books, but 3      I have assisted in the editing of a book, This Is 4      Service Design Doing. 5      <b>Q. Service Design Doing. So I'll just go back</b> 6      <b>over two other areas of expertise and similar</b> 7      <b>questions.</b> 8      <b>So with respect to user experience, is</b> 9      <b>user experience synonymous with UX?</b> 10     A. I would say that, yes. 11     <b>Q. Okay. And can you describe that area of</b> 12     <b>expertise, what it entails?</b> 13     A. I -- I can attempt. It's -- it's a -- it's 14     a big field. User experience design, in a nutshell, 15     encompasses understanding a problem, the research 16     investigation, digestion of a problem space, the 17     generation of insights regarding that problem in the 18     specific problem context, applying those insights 19     through design, research, testing, and then taking 20     your design and ideating them, and then, of course, 21     testing those again, applying that in development 22     even, and then, of course, looping back again. 23     At Precocity, in fact, we have a 24     shorthand for describing the process called IDEA, 25     insights, design, evaluate, apply. The first part is</p>
14	16
<p>1      I've attended Service Design Network 2      conferences. I've attended User Experience 3      Professionals Association conferences and spoke at 4      them as well. I've attended a Big Design Conference 5      and Game Developers Conference and probably some more 6      that I can't think of right at this moment. 7      <b>Q. And all those were related to survey design?</b> 8      A. Aspects of them, yes. Again, UX is -- is 9      many varied and -- and survey design, quant and qual 10     research is an aspect of it, and I've attended 11     workshops and -- and panels on that specifically. 12     <b>Q. Okay. What specific workshops on survey</b> 13     <b>design did you attend?</b> 14     A. I can't recall specifically. It's been over 15     the course of 23 years. 16     <b>Q. In your master's degree, do you recall any</b> 17     <b>specific coursework on survey design?</b> 18     A. No. Again, that's also been about 23 years 19     almost. 20     <b>Q. Okay.</b> 21     A. I don't recall any specific ones, no. 22     <b>Q. Do you have any peer-reviewed publication</b> 23     <b>with respect to survey design?</b> 24     A. I have no peer-reviewed publication, but I 25     do publish fairly frequently on my blog.</p>	<p>1      about understanding, like I said, unraveling the yarn 2      of the problem. Design is the attempted solution of 3      the problem. Evaluate, you test your hypothesis, 4      which was your design. And then you apply it if you 5      think it was effective. 6      And then, of course, you continue to do 7      it over and over again. There are a lot of other 8      factors that -- that I can speak to if you'd like to 9      go deeper. 10     <b>Q. When you first started your answer, you said</b> 11     <b>"user experience design". So I just want to make sure</b> 12     <b>we're using the same terms.</b> 13     A. Sure. 14     <b>Q. So is user experience UX and user experience</b> 15     <b>design all -- are all those terms synonymous?</b> 16     A. To an extent. So in my world, in fact, I 17     actually can in -- in some cases just say "experience 18     design" because it's a little more general. Because 19     in my world I wear the hats of a UXR, a UX researcher, 20     a UXD, a UX designer, a UID, sometimes a UI designer, 21     an IAD, which is an information architect or -- and 22     design sometimes, and then there are others. Service 23     design, SD. 24     And so all of those little acronyms, 25     they are all aspects of the overall experience of --</p>

21

23

1 websites. So...

2 **Q. Okay. And just -- just to be clear or maybe**  
 3 **to ask a slightly more specific question, so of these,**  
 4 **which relate to...**

5 Let me rephrase that question.

6 **Of the usability and user research**  
 7 **studies you've conducted as listed here, which is**  
 8 **unrelated to the user experience of interacting with a**  
 9 **website from a desktop?**

10 A. Okay. I believe I understand your question.  
 11 Which of these involved testing websites that might be  
 12 accessed from a desktop computer; is that -- is that  
 13 correct?

14 **Q. From a user perspective, yes.**

15 A. Okay. So, as I said, the Love's Travel Stop  
 16 involved websites from a desktop computer. The U.S.  
 17 Air Force, there were aspects of that study that  
 18 included websites and things accessed from desktop  
 19 computers including -- you know, which is websites.

20 I've done quite a few studies at  
 21 Toyota, not just the HMI one, and I don't recall  
 22 offhand if any of those involved websites on a desktop  
 23 computer. They may have, but I -- I can't recall at  
 24 this time.

25 **Q. Okay. Have you ever conducted a usability**

1 gathering, virtually every single time involves an  
 2 expert report.

3 **Q. That was a bad question.**

4 **Have you ever written an expert report**  
 5 **for -- or helped in the writing of an expert report**  
 6 **for purposes of litigation?**

7 A. For litigation, this is my first time.

8 **Q. On Paragraph 12 of your -- your report, and**  
 9 **this is Page 6, you say "In performing this**  
 10 **assignment, I used the same methodologies I use in my**  
 11 **expert --."**

12 **THE REPORTER:** I'm sorry. When you're  
 13 reading --

14 MR. AIJAZ: Too fast.

15 THE REPORTER: -- either louder --

16 MR. AIJAZ: Got it.

17 THE REPORTER: -- or you can keep your  
 18 speed, but louder.

19 MR. AIJAZ: Keep my speed. I like  
 20 that. Thank you.

21 THE REPORTER: You're welcome.

22 **Q. (By Mr. Ajaz) So Page 6, Paragraph 12 you**  
 23 **wrote "In performing this assignment, I used the same**  
 24 **methodologies I use in my expert consulting and**  
 25 **academic work."**

22

24

1 **research study of an online subscription service?**

2 A. I've done a lot of projects over the years,  
 3 and at this moment I don't recall if that -- that is a  
 4 specific thing I've done in the past or not. I may  
 5 have, and I just may not recall at this moment.

6 **Q. And have you ever conducted an analysis of**  
 7 **an online cancellation flow?**

8 A. Very likely, but at this moment I cannot  
 9 recall if that specific thing has been a part of a  
 10 study I've done specifically. I've designed websites  
 11 that have those things and we've studied them, but,  
 12 again, I -- I'm not exactly sure at this time.

13 **Q. Okay. What websites have you designed that**  
 14 **have those things that you've studied?**

15 A. There are a couple I can think of offhand  
 16 that have subscriptions involved. Most -- most do  
 17 not. Again, it's -- I've -- I've done a lot. So it's  
 18 kind of hard to pick a specific one right now.

19 **Q. Okay. Have you ever served as an expert for**  
 20 **purposes of litigation?**

21 A. This is the first time.

22 **Q. Have you ever been a part of writing an**  
 23 **expert report?**

24 A. Absolutely. And in terms of my job, I --  
 25 especially involving user research and insight

1 **What academic work are you referring**  
 2 **to?**

3 A. I have taught a number of classes at  
 4 Southern Meth -- Southern Methodist University, both  
 5 in UX and service design as well as workshops and --  
 6 and things of that nature.

7 **Q. Do you teach survey design in your academic**  
 8 **work?**

9 A. Yes. It is part of the kind of -- when we  
 10 do research, both for service design and for UX,  
 11 survey design has been a part of the curriculum.

12 **Q. Are your teaching materials available**  
 13 **publicly?**

14 A. No, they are not.

15 **Q. Well, what sources do you use when you're**  
 16 **teaching survey design in your academic work?**

17 A. So there are a lot of articles and -- and  
 18 materials available online that -- that help experts  
 19 understand how best to solve the problem at hand  
 20 because we always encounter new problems that we  
 21 haven't encountered before, and sometimes there's a  
 22 new study to address that.

23 So we've used -- usability.gov has been  
 24 in the past, and now digital.gov is, a great source.  
 25 We use Nielsen Norman Group. We use measuringu.com.

6 (Pages 21 to 24)

25

1 A lot of websites out there as well as other  
 2 UX-specific articles. Books. Again, a lot of books.  
 3 That's primarily where I draw learning and  
 4 understanding that I can then relate to my students.

5 Q. Okay. And you dis -- you say "I used the  
 6 same methodologies" in that paragraph.

7 What methodologies are you referring  
 8 to?

9 A. The ones we discussed earlier where you  
 10 apply inquiry to understand and unravel a problem,  
 11 research to -- to gather insights, form hypotheses  
 12 about potential -- potential solutions, design and  
 13 evaluation of those --

14 Q. Okay.

15 A. -- those frameworks. Like -- like the 10  
 16 years is -- 10 usability heuristics -- heuristics from  
 17 Jacob Nielsen as well as many others.

18 Q. So in either your expert consulting or  
 19 academic work, do you review consumer complaints?

20 A. Sometimes, but not super often.

21 Q. Do you interview customers?

22 A. Yes.

23 Q. And what do you do with the information you  
 24 get from customers?

25 A. We will tabulate it, we'll analyze it for

26

1 of that whole picture.

2 Q. Okay. And you mentioned the number of  
 3 methodologies you use.

4 Does one of the pieces of work product  
 5 include recommended areas for improvement to the  
 6 client?

7 A. In the cases where I'm engaged where --  
 8 the assignment or the -- the job is to improve the  
 9 situation, then, yes. In some situations that is  
 10 not -- this -- within the scope of my assignment.  
 11 Sometimes it's just "Please research a problem" or  
 12 "Give us the current state of things without providing  
 13 insights into problems or potential solutions."

14 Q. So when you're asked to describe the current  
 15 state of things, would you identify problems with the  
 16 current state of things?

17 A. Potentially, sometimes. But, again,  
 18 sometimes it's literally just "Please capture the  
 19 state of how things are today and -- and give us kind  
 20 of a holistic report of what that is so that they can  
 21 have an understanding." Sometimes there are follow-up  
 22 engage -- engagements that will probe deeper.  
 23 Sometimes it's literally just "How is this doing right  
 24 now today?" And they are not interested in our  
 25 potential opportunities or problems or solutions.

26

28

1 quantitative and qualitative data, we will use it to  
 2 gain insight into their motivations and how they  
 3 think, how they feel, what they do, and then use those  
 4 to try to create solutions to help them.

5 Q. And you do that with both the information  
 6 collected from customer interviews and consumer  
 7 complaints?

8 A. So when consumer complaints are involved in  
 9 the data collection aspect of things, then -- then  
 10 that is taken into account. But we -- as I said, we  
 11 don't use complaints a ton, yeah. I...

12 Does that answer your question?

13 Q. Well, do you use it at all?

14 A. Do you -- do I use --

15 Q. Do you use consumer complaints at all?

16 A. Sometimes.

17 Q. When do you use them?

18 A. The times we would use them would be in  
 19 situations where it is not clear, or especially if the  
 20 client doesn't have a clear understanding of what they  
 21 would like us to accomplish, and it's kind of an open  
 22 book. So then we probe all aspects, including  
 23 complaints if they have them on record, but never just  
 24 complaints. It will be the whole picture across  
 25 the -- across the spectrum because complaints are part

1 Q. And I just want to -- I think we asked this  
 2 question. I just want to confirm.

3 As of today you can't identify a  
 4 specific instance where a cancellation or a  
 5 subscription flow was part of your work?

6 A. It's very difficult to say. I -- I might be  
 7 able to go back and -- and identify a specific one,  
 8 but right at this moment I cannot.

9 Q. Okay, all right. So what did you do to  
 10 prepare for today's deposition?

11 A. I primarily read through my report and my  
 12 rebuttal report as well as Dr. King's opening report  
 13 and rebuttal report.

14 Q. Did you speak to anyone?

15 A. In -- sorry. In what capacity? Could you  
 16 rephrase?

17 Q. In order to prepare for today's deposition,  
 18 did you speak to anyone?

19 A. I met with counsel.

20 Q. Did you speak to anyone from Match apart  
 21 from the lawyers?

22 A. No.

23 Q. Okay. And when were you retained for this  
 24 work?

25 You -- let me rephrase that.

29

**When was Precocity retained?**

A. I think it was --

MR. HUMMEL: Objection. Misstates the testimony.

A. I -- I believe I was retained in around September of 2022.

**Q. (By Mr. Ajiaz) Okay. And I'm sorry. So were you retained or was Precocity retained?**

A. I am not a lawyer. I am a consultant who works for Precocity. The contract, I believe, is with Precocity. But, in my capacity, I operate as the expert and the named entity. So Precocity is the company for which I work. They're the ones getting paid. I'm the expert and this is my work.

**Q. Okay, thank you. And is the fee agreement on Page 4, Paragraph 7 still accurate?**

A. Yes, in the sense that Precocity is being compensated at those rates. I do not make an extra penny one way or the other. This is a project on -- on which I am -- I'm salaried. So I don't make any additional money on this project versus any other project that I'm on.

**Q. I understand. Do you have any financial interest in Match?**

A. I do not.

1 Q. Did your opinion of the -- did your  
2 heuristic analysis change based on their edited  
3 suggestions?

4 A. It did not.

5 **Q. Okay. And when you were retained, what were  
6 you asked to do for this matter?**

7 A. My assignment was to investigate the  
8 cancellation flow, to help find whether or not it was  
9 simple.

10 **Q. Did you assess any other parts of the  
11 match.com website?**

12 A. The -- a little bit of the -- the  
13 subscription as well as the cancellation, and then I  
14 did a cursory review of the rest of the website.

15 **Q. Okay. Were you asked to avoid evaluating  
16 any parts of the website?**

17 A. No.

18 **Q. Is there any analysis you did that's not  
19 included in the report?**

20 A. No, not that I can think of.

21 **Q. Okay. So this report includes all your  
22 assessments of the Match website?**

23 A. There may be other elements that I  
24 researched that did not make it into the report  
25 because they didn't seem relevant or -- but -- and

30

1 **Q. Okay. Do you know if Precocity does?**

2 A. I -- I cannot speak to that. I do not  
3 think they do, though.

4 **Q. Okay. Do you know how many hours you've  
5 worked on this so far?**

6 A. On -- on which?

7 **Q. On this matter entirely.**

8 A. This matter? I believe myself, roughly,  
9 400.

10 **Q. And do you know Precocity -- your team at  
11 Precocity, do you know how many hours they've worked  
12 on the matter?**

13 A. I think -- overall, including myself, I  
14 think somewhere around 700.

15 **Q. Okay. And you mentioned some of the people  
16 who have assisted you, John Coomer and River King.**

17 **Did anyone do -- apart from you, do a  
18 heuristic analysis of the Match website?**

19 A. So we worked as a team. We each in -- did  
20 individual ones. I produced mine and they helped  
21 edit. So all four of us did analyses. I wrote mine,  
22 and then they helped me edit mine given their  
23 experience through their own personal analysis. But  
24 the -- the analysis in this report is mine. They  
25 helped me edit it.

1 there may be things that come up that I learn about in  
2 the future that I might add to, but for right now my  
3 understanding and the -- the research that I did is  
4 encompassed in my report and my rebuttal.

5 **Q. Okay. You said -- you said other things  
6 might come up.**

7 **Are --**

8 A. I --

9 **Q. What do you mean by that?**

10 A. I can't say that everything I'll ever think  
11 in the future is included in -- in this document. If  
12 new things come to light or -- or I'm asked to do  
13 additional work, then I think I'm allowed to add to  
14 that. But I can't say for certain that every jot and  
15 tittle of everything I've ever thought is included  
16 here. Just mostly the relevant stuff.

17 **Q. Jot and tittle. I like that.**

18 **Are there -- as -- as you sit here  
19 today, are there things that you intend to do to  
20 prepare for trial in terms of assessing the website?**

21 A. Not at this moment that I'm aware of.

22 **Q. Okay. So do you plan to do anything else  
23 before trial, again, as we sit here today?**

24 A. Not that I'm aware.

25 **Q. So you reviewed the report in preparation**

31

8 (Pages 29 to 32)

49

1 or things that might prevent them from accomplishing  
 2 their task? And given the analysis against that  
 3 framework and those things that -- as we discussed  
 4 earlier, I found that it did not and that it was, in  
 5 fact, quite usable and straightforward.

6 **Q. And you found no potential stumbling blocks  
 7 for users?**

8 A. So the scope of my assignment was to  
 9 determine whether or not the system was simple. It  
 10 was not to identify problems. It was not to call out  
 11 things. It was merely to look at the system as a  
 12 whole and to determine whether or not it was simple in  
 13 my expert opinion when -- with regard to the heuristic  
 14 analysis.

15 So I -- I can't offer any opinions  
 16 on -- as to potential design or -- or problems, et  
 17 cetera. The scope of my analysis was, is this simple  
 18 or not against the framework that we discussed? And I  
 19 found that it was.

20 **Q. So, as an expert, if there were problems,  
 21 you would have seen them; right?**

22 MR. HUMMEL: Objection, vague.

23 A. Would you like to rephrase?

24 **Q. (By Mr. Aijaz) No.**

25 A. Potentially.

50

1 specific things.

2 My question to you is that, from your  
 3 experience using the flow, did you identify any  
 4 potential problems in the cancellation flow?

5 MR. HUMMEL: Objection. Vague,  
 6 overbroad, outside the scope.

7 A. I cannot offer any opinions on that.

8 **Q. (By Mr. Aijaz) Why can't you offer any  
 9 opinions on that?**

10 MR. HUMMEL: Objection. Argumentative,  
 11 vague.

12 A. That is not the scope of my assignment here  
 13 today.

14 **Q. (By Mr. Aijaz) I understand that. It's a  
 15 factual question, though, as to whether or not you saw  
 16 any potential problems. You're not bound by what was  
 17 in the report. If I present to you a document that  
 18 wasn't provided to you, you're still required to  
 19 answer that question.**

20 So, again, I'm going to ask the  
 21 question. If you refuse to answer, then we'll move  
 22 on. But I'm asking if you saw any potential problems  
 23 in the cancellation flow.

24 MR. HUMMEL: Objection. Vague,  
 25 overbroad, asked and answered.

51

1 **Q. Potentially. Did you see any problems?**

2 MR. HUMMEL: Objection, vague.

3 A. I -- I am not here to offer opinions on  
 4 that. The scope of my assignment was to understand  
 5 whether or not it was simple.

6 **Q. (By Mr. Aijaz) I -- I understand the scope  
 7 of your assignment.**

8 But what I'm asking is, did you see any  
 9 potential problems in the cancellation flow of the  
 10 match.com website?

11 MR. HUMMEL: Objection, vague.

12 A. I'm -- I'm not going to offer any opinions  
 13 on that today.

14 **Q. (By Mr. Aijaz) You -- you're not going to  
 15 answer that question?**

16 A. I cannot offer any opinions as to whether or  
 17 not problems are there or not. It is outside the  
 18 scope of my assignment.

19 **Q. So I'm not asking about the scope of your  
 20 assignment. You told me that you signed up and  
 21 cancelled for the match.com subscription, I believe,  
 22 20 times or so.**

23 A. Around that.

24 **Q. You're being presented as an expert in user  
 25 experience, and I understand they asked you to do**

1 A. I can't offer any opinions on that today.

2 **Q. (By Mr. Aijaz) Okay. We may get back to  
 3 something similar to this, but for now we'll -- we'll  
 4 move on.**

5 **And how did you learn to do a heuristic  
 6 analysis?**

7 A. Over the course of my 47,000 hours of  
 8 consulting and working in-house for hundreds of  
 9 clients, it became a regular part of my job. Part of  
 10 it was during grad school understanding how to -- how  
 11 to do research and the courses I took there, but  
 12 pre -- mostly on the job as I sought to understand how  
 13 to research and design and build better products.

14 **Q. Have you ever done a heuristic anal...**

15 **So, apart from this matter, have you  
 16 ever done a heuristic analysis of a cancellation flow?**

17 A. I believe we discussed that earlier. And,  
 18 as I said then, I cannot recall precisely if a  
 19 specific cancellation flow was part of a heuristic  
 20 analysis I've done in the past. There may have been.  
 21 I -- I just can't recall at this time.

22 **Q. So in your report you cite the 1st edition  
 23 of Designing Web Navigation by James Kalbach.**

24 **And this is in your bibliography and  
 25 materials cited; is that correct?**

52

13 (Pages 49 to 52)

57

1 I -- I can't remember the URL offhand. It's not this  
 2 workbook, but it talks about the different phases an  
 3 expert would go through to perform an analysis.

4 But the -- the key element there is his  
 5 definition at the beginning of that article, which is  
 6 the formulation of ideas in the investigation of or  
 7 the solution to a problem. So the problem space here  
 8 was, is the cancellation flow simple? And my  
 9 heuristic analysis followed the Nielsen Norman Group  
 10 example of heuristic analysis flow in the  
 11 investigation of that question.

12 Q. (By Mr. Aijaz) Are you aware that the  
 13 Nielsen Norman Group has an article on its website  
 14 titled How to Conduct a Heuristic Evaluation?

15 A. That could possibly be the one that I'm  
 16 referring to.

17 Q. If it was the one that you were referring  
 18 to, would you have cited it in your bibliography and  
 19 materials considered?

20 A. Not likely. The bibliography is really just  
 21 things that we cited. I don't think I just -- I've  
 22 looked at a lot of websites, and -- and so I -- I  
 23 don't include every single website I've -- I've  
 24 glanced at unless we were specifically calling it out,  
 25 I think.

1 of course, it's Nielsen Norman Group that's authored  
 2 it. So...

3 Q. So was that for -- was that for -- okay.

4 MR. HUMMEL: Attorney-client  
 5 communication.

6 Q. (By Mr. Aijaz) All right. So on -- well,  
 7 just to identify it, the exhibit, would you mind  
 8 reading at the very top the title of the article?

9 A. How to Conduct a Heuristic Evaluation.

10 Q. Thank you. Towards the bottom of the page  
 11 there's a sub -- I don't know -- subheading that says  
 12 "Decide How to Document Evaluations," and there are  
 13 three examples. One is the Heuristic Evaluation  
 14 Workbook.

15 That was the --

16 A. The thing we -- yeah.

17 Q. It's --

18 A. Exhibit 3.

19 Q. Correct. Other examples. It has a  
 20 spreadsheet and a digital whiteboard.

21 My question to you is that, did you  
 22 document your evaluation in some manner?

23 A. My analysis was documented in its writing.  
 24 So as I went through, I -- I wrote my notes, gathered  
 25 resources, citations, looked at websites, and pretty

58

60

1 Q. Okay. But in terms of the specific  
 2 methodology you used, are you aware that Nielsen  
 3 Norman Group has an article in which it describes how  
 4 to conduct a heuristic evaluation?

5 A. Potentially, yes. It -- it may be the one  
 6 that I was referring to.

7 Q. And did you use that, the methodology as set  
 8 forth in that article?

9 A. It's possible that I used that particular  
 10 one. I don't know if it's that specific one. And,  
 11 again, due to the assignment here it was a very  
 12 focused heuristic analysis rather than one that, as  
 13 you've outlined in this workbook, was a little  
 14 different.

15 (Exhibit Number 4 marked.)

16 Q. (By Mr. Aijaz) So I'm going to hand you  
 17 what will be marked Exhibit 4.

18 Do you recognize this article?

19 A. Could you give me a moment to review it?

20 Q. Please.

21 A. No. I have not seen this article before.

22 Q. Okay. So this is not the article you were  
 23 referring to?

24 A. This is not the article I'm referring to.

25 There are -- there are some elements on here that --

1 much just, you know, gathered a data dump, if you  
 2 will, of -- of all the things that I saw, all the  
 3 things that I observed and how it related to various  
 4 heuristics, and then continued to iterate and -- and  
 5 edit that document. It was in a Google Doc.

6 Q. And did you produce those notes?

7 A. No, I -- I did not. It's work -- it was  
 8 just work product, and eventually it was refined into  
 9 my report. My report is what I produced. So I'm not  
 10 sure if that -- if I'm being very clear. Everything  
 11 was in one document, and then I edited it down into  
 12 the refined document that you see in my opening  
 13 report.

14 Q. If you could turn to Page 3 there's another  
 15 subheading called "Look for Issues". And the second  
 16 sentence under that heading says "In this second pass  
 17 look for design elements, features or decisions that  
 18 violate one of the 10 heuristics."

19 Did you go through in your heuristic  
 20 analysis to look for violations of the 10 heuristics?

21 A. In my analysis, using the 10 heuristic  
 22 framework from Nielsen Norman Group, I did evaluate  
 23 each of the heuristics against the cancellation flow  
 24 as a whole. My goal in my analysis was not to seek  
 25 out and identify problems. My goal in my analysis was

15 (Pages 57 to 60)

61

1 to understand whether or not the flow was simple.

2 **Q. Is there any authority for showing that that**  
3 **is the outcome of a heuristic...**

4 MR. AIJAZ: Let me scratch that.

5 **Q. (By Mr. Aijaz) Do you have any examples of**  
6 **a heuristic analysis where the outcome is to determine**  
7 **whether a flow is simple?**

8 A. I'd like to point you to Page 1 of this  
9 Exhibit 4 that you provided. In the center of the  
10 page under When to Conduct a Heuristic Evaluation,  
11 Paragraph 3, it states "Heuristic evaluations cannot  
12 replace user research. User experience design is  
13 highly contextual." And as you read later on, even in  
14 the Decide How to Document Evaluations it says you  
15 might use. Going back to the statement, UX design is  
16 highly contextual.

17 So, to answer your question, it  
18 depends. And -- and it's -- I can't answer that  
19 question in the way it's phrased because everything  
20 that UX designers do and UX researchers do is highly  
21 contextual. What you do in one study may or may not  
22 apply to what you do in another study, and that's why  
23 it's not -- you know, even Nielsen Norman Group  
24 doesn't prescribe this is the way, the only way, to  
25 conduct a study. They say you might and you could and

63

1 very often they want to know the current state of  
2 things, and that is very common. Sometimes they want  
3 to understand the problems at hand, sometimes they  
4 think they already know, sometimes they just don't  
5 care, sometimes they don't want to spend money for it.

6 So, again, the evaluation that you  
7 perform is in service of the problem that you  
8 were hired to do. And in the scope of this engagement  
9 my analysis was to determine whether or not it was  
10 simple.

11 **Q. Okay. And your expert report doesn't**  
12 **identify any problems with the Match website; correct?**

13 A. I believe that was outside the scope of my  
14 assignment and what I produced.

15 **Q. Okay. Does it identify any recommendations**  
16 **for improvement?**

17 A. Not to my knowledge.

18 **Q. So based on your experience as a -- based on**  
19 **your user experience, user...**

20 MR. AIJAZ: Let me scratch that.

21 **Q. (By Mr. Aijaz) Okay. And there were prior**  
22 **versions of the website; correct?**

23 A. There are versions of the website that  
24 existed prior to the live version that is live now,  
25 yes.

62

1 you should and -- but, again, everything is highly  
2 contextual. So in specific answer to your question,  
3 I -- I can't point to anything specific.

4 MR. AIJAZ: Okay. I was going to ask  
5 you to reread the question.

6 **Q. (By Mr. Aijaz) But you got there in the**  
7 **end.**

8 A. Okay.

9 **Q. So you cannot point to a specific example**  
10 **where a heuristic analysis is used to determine if a**  
11 **flow is simple?**

12 A. The world is an infinite place, and  
13 everything is -- is relative. So I am currently  
14 unaware of an analysis that is regarding simplicity  
15 alone.

16 **Q. Okay, thank you.**

17 A. There may exist one, though.

18 **Q. But --**

19 A. There does now. I -- I wrote one.

20 **Q. And as of today you can't point to another**  
21 **example other than your own?**

22 A. As I said earlier in answer to one of the  
23 other questions, on occasion clients hire me to  
24 evaluate systems. Whether or not they're  
25 cancellation-flow specific is -- is up for grabs, but

64

1 **Q. And how did you review those?**

2 A. The only way we could, which was through the  
3 screenshots and videos supplied.

4 **Q. Are all of the screenshots and videos**  
5 **supplied cited in your report?**

6 A. I do not believe they are in -- in my  
7 report. I referenced them. Not this specific -- just  
8 a number of paragraphs throughout my report referenced  
9 looking at prior versions of the system. To my  
10 knowledge, those were already a part of the record,  
11 and I didn't specify them in my -- in my bibliography  
12 because -- yeah.

13 MR. AIJAZ: So, Chad, we would say that  
14 the materials he reviewed, including the prior  
15 versions, form the basis of the report because he's  
16 making statements about the prior versions. And would  
17 you agree to identify those?

18 MR. HUMMEL: Your question is noted.

19 MR. AIJAZ: Okay. We'll take that  
20 offline.

21 **Q. (By Mr. Aijaz) For the prior versions that**  
22 **you looked at, were you provided information about**  
23 **when the time period in which those versions were in**  
24 **place on the website?**

25 A. I believe they were included in the -- the

89

1       Q. So you say that "This length of time is  
 2       reasonable for a cancellation task."

3       Is there any data you have regarding  
 4       time to cancel for other cancellation -- for a  
 5       cancellation of other -- other than match.com?

6       A. I don't have any data offhand, no.

7       Q. Okay. On Page 9, the -- on this last  
 8       bullet, the last sentence you say the -- you wrote  
 9       "The speed with which subscribers can complete the  
 10      cancellation process and the fact that the  
 11      cancellation process is quicker than the subscription  
 12      process is more evidence that Match.com's online  
 13      cancellation process is simple;" is that correct?

14      A. Correct.

15      Q. So if you were comparing two websites that  
 16      had the exact same cancellation process, but one had a  
 17      long sign-up process and the other had a short  
 18      process, so would one cancellation flow be simple and  
 19      the other not?

20      A. Not necessarily.

21      MR. HUMMEL: Objection. Vague,  
 22      overbroad, beyond the scope. Let me have a chance to  
 23      object.

24      THE WITNESS: Okay.

25      Q. (By Mr. Aijaz) You can answer now.

91

1       Q. Okay. Is the existence of alternative means  
 2       of cancellation relevant to whether a particular  
 3       cancellation flow is simple?

4       A. I --

5                    MR. HUMMEL: Objection. Beyond the  
 6                    scope, vague.

7                    A. It's difficult to answer in -- in that  
 8                    phrasing.

9                    Q. (By Mr. Aijaz) Okay. On Paragraph 29 --  
 10                  and this is -- we're entering this section that you  
 11                  titled Background on the Cancellation Process in  
 12                  general.

13                  MR. HUMMEL: Hey, Hasan, we've been  
 14                  going about an hour. Do you want to take a break now?

15                  MR. AIJAZ: Yeah, we can do that.

16                  MR. HUMMEL: Okay.

17                  MR. AIJAZ: We can do that.

18                  MR. HUMMEL: We'll do that.

19                  MR. AIJAZ: Yeah. Let's go off the

20                  record.

21                  MR. HUMMEL: Off the record.

22                  (Break.)

23                  MR. AIJAZ: So back on the record.

24                  Q. (By Mr. Aijaz) All right. So we're turning  
 25                  into the Background on the Cancellation Process. On

90

1       A. Not necessarily.

2       Q. And why not?

3                    MR. HUMMEL: Same objections.

4       A. Again, everything is relative. So I can't  
 5       speak hypothetically to any -- some unnamed website  
 6       and what their flow is and what there is or isn't.

7       So in the case of here you want to  
 8       avoid sys -- systems where it's super easy to get in,  
 9       but then really hard to get out. And so one way to  
 10      measure that is, how long did it take to get in versus  
 11      how long did it take to get out? It's just one -- one  
 12      metric that you can use among many.

13      Q. (By Mr. Aijaz) Okay. And on Footnote 1 on  
 14      this page you say you understand there are other  
 15      methods of cancellation.

16      A. Uh-huh.

17      Q. But you have not assessed those other  
 18      messages -- methods because your expertise is in  
 19      website usability and design.

20      Did you analyze any of the mobile  
 21      flows?

22      A. I did not.

23      Q. Why not?

24      A. The scope of my assignment was restricted to  
 25      the web.

92

1       Page 10, Paragraph 29 you list a number of websites  
 2       where you describe the Settings page.

3                    A. Uh-huh.

4       Q. How did you come up with this list of  
 5       websites?

6                    A. i is one that I worked on, which is  
 7                    WorldatWork, which is Number ii. The rest are just  
 8                    some common websites that we thought maybe users may  
 9                    have encountered because they're popular enough,  
 10                  pretty -- what's the word -- ubiquitous.

11                  THE REPORTER: Say it again.

12                  THE WITNESS: Ubiquitous.

13                  THE REPORTER: Thank you.

14      Q. (By Mr. Aijaz) And was there a cutoff?

15      You know, did you pick the top 10 most  
 16      popular websites?

17      Or how did you determine, you know,  
 18      which popular websites to look at?

19      A. Again, it was "Hey, let's, together as a  
 20      team, come up with some of the most popular websites,  
 21      including -- let's include one that we worked on to  
 22      see if this is something that -- that -- that is  
 23      fairly common." It's -- again, it's just a judgment,  
 24      part of the heuristic analysis, right, making an  
 25      expert opinion.

23 (Pages 89 to 92)

109

111

1       **Q. In other words, a button element you can  
2 give an intimation if it's being clicked in a way that  
3 you could not for a href element; correct?**

4       A. It's been awhile since I've coded.

5       **Q. Okay.**

6       A. But I do believe that you can do either or.  
7 You can style an a href to look like a button. You  
8 can style a button to look like an a href. It -- it  
9 all depends on the CSS.

10      **Q. And so you believe the Cancel  
11 Subscription -- the HTML syntax is that of a button?**

12      A. I don't know. I didn't look at the -- the  
13 syntax -- syntax.

14       **Q. Okay.**

15       A. So when I say "Cancel Subscription button,"  
16 what I'm referring to is the Cancel Subscription link.

17       **Q. Okay.**

18       A. And in that point I'm using the -- the term  
19 in the -- I don't know the -- the descriptive word --  
20 the phrase where -- a clickable item.

21       **Q. Okay.**

22       A. Yeah. So...

23       **Q. On this page, Page 18 -- so -- and is this  
24 what you refer to as the Manage Subscription page?**

25       A. Yes.

1       **flow?**

2       A. That is an opinion about this particular  
3 screen...

4       **Q. Uh-huh.**

5       A. ...given that in the layout there are  
6 only -- there are three options available to you, and  
7 each of them is made clear given the controls used to  
8 surface those.

9       **Q. So that opinion is just as to this  
10 particular page?**

11      A. What -- what paragraph --

12       **Q. The --**

13       A. -- are you referring to again?

14       **Q. Paragraph 38.**

15       A. Okay.

16       **Q. The last sentence on Paragraph 38.**

17       A. Yeah. Yeah. That was in reference  
18 specifically to this page.

19       **Q. Okay.**

20       A. In some cases it could be applied elsewhere  
21 as well, but this particular one was specifically  
22 referencing this page.

23       **Q. Okay. We're going to have to go down that  
24 road.**

25       **So you say it could be applied in**

110

112

1       **Q. Okay. On this page, what is the most  
2 prominent call to action excluding the header?**

3       A. Excluding the header, there's a -- there's a  
4 call to action to get four more views for free --  
5 the -- in the -- in the banner below the --  
6 the main nav, and then below that the Back to Home is  
7 the most prominent call to action. So it goes --  
8 basically if you're to look at it in a -- Start Now is  
9 given priority and then followed by Back to Home.

10      **Q. Okay. And you mentioned the F -- people  
11 read in an F pattern?**

12       A. Uh-huh.

13       **Q. What does look -- reading this page in an F  
14 pattern look like?**

15       A. You would read the Limited-time only, and  
16 then you would drop down and you would potentially see  
17 Subscription Status, Cancel Subscription and then Back  
18 to Home.

19       **Q. Okay. Sorry. Going back to the previous  
20 page, Paragraph 8 --**

21       A. Uh-huh.

22       **Q. -- you say "Match.com could hardly make it  
23 more clear or simple to cancel."**

24       **Is that an opinion that there was  
25 little that Match could do to improve the cancellation**

1       **other -- you said -- so this sentence, "Match.com  
2 could hardly make it more clear or simple to cancel."**

3       **So where is that -- what parts of the  
4 flow is that applicable to?**

5       A. Again, the overarching result of my  
6 heuristic analysis, the data Match provided, the  
7 usability study, the compara -- comparative analysis,  
8 the convergence of the data all lead to the conclusion  
9 that it is simple. That's just one time where I state  
10 it in specific regards to this page as we're in the  
11 Manage Subscription page portion of this report and  
12 it's referring to Figure 4.

13       **Q. Well, you don't -- if you'll go to Paragraph  
14 38, you don't say that it is simple. You say  
15 "Match.com could hardly make it more clear or simple  
16 to cancel."**

17       **So my question is, if there was a one-  
18 click cancellation process, wouldn't that be more  
19 simple to cancel?**

20       A. Hypothetically, there are an infinite number  
21 of ways that any process can be improved, right. And,  
22 as an expert, I see that everywhere I go, every time I  
23 enter a room and I try to pull on the door, but it's a  
24 push, right. Every -- everything I observe, I have  
25 opinions on whether or not it could be improved.

28 (Pages 109 to 112)

145

1       **reset your password?**  
 2       A. I believe that is what occurred in my case,  
 3       yes.  
 4       **Q. Did that password go to your inbox or did it**  
 5       **go to a spam folder?**  
 6       A. If I recall correctly, it went to my inbox.  
 7       **Q. Okay. On Page 135 of your report, is this**  
 8       **the e-mail that you received when resetting your**  
 9       **password?**  
 10      A. It appears to be so, yes.  
 11      **Q. Okay. And the top -- or towards the top-**  
 12      **right it says -- there's a Folder icon and it says**  
 13      **Trash - Precocity.**  
 14      **Do you see that?**  
 15      A. Yeah.  
 16      **Q. How did this e-mail get to the trash folder**  
 17      **of your inbox?**  
 18      A. I had placed it there.  
 19      **Q. Okay. It wasn't placed there automatically**  
 20      **by your software?**  
 21      A. No.  
 22      **Q. Okay. We will turn to the survey you ran --**  
 23      **or rather the usability study.**  
 24      A. Study?  
 25      **Q. Can you describe what the purpose of the**

147

1       **results to make conclusions about the actual**  
 2       **cancellation flow of the match.com website?**  
 3       A. To some extent the heuristic analysis and  
 4       the u -- and user research go hand in hand, right.  
 5       You form a hypothesis, then you test your hypothesis.  
 6       So parts of the heuristic analysis were written for  
 7       the -- for the most part, then we designed and ran the  
 8       study, and then the study then further informed  
 9       additional parts back into the heuristic analysis.  
 10      All right. So I had this hypothesis  
 11      that it was simple because of these reasons and then  
 12      we ran the study, and, lo and behold, our hypothesis  
 13      checked out for these reasons. So they -- they go  
 14      together. You can't -- I mean, you -- you can take  
 15      the data in and of itself and leave the heuristic  
 16      analysis, but you can't just have a heuristic analysis  
 17      without user data.  
 18      **Q. Okay. And you drew certain res --**  
 19      **conclusions about the match.com, the cancellation**  
 20      **flow, from the results of your study; is that correct?**  
 21      A. Yeah. I formed -- I formed hypotheses  
 22      before and then verified some of those and then  
 23      confirmed others and -- and then -- yeah, I'd -- I'd  
 24      say that's fair.  
 25      **Q. If the sample from which you drew your study**

146

1       **study was?**  
 2       A. Yes. I wanted to conduct a study to help  
 3       understand if the hypotheses that I formed in my  
 4       heuristic analysis hold up. Also, I wanted to get  
 5       empirical, objective, quantitative data from  
 6       match.com-like users to understand a real-world  
 7       perspective on the simplicity of the flow.  
 8       So, as -- as we covered earlier, a  
 9       heuristic analysis alo -- alone -- a heuristic  
 10      analysis alone is not enough to understand or -- or  
 11      research a problem. You have to conduct user  
 12      research. Otherwise, you're just forming hypotheses.  
 13      So we conducted this study to gain that additional  
 14      insight into how actual users would perform in the  
 15      real world under realistic real-world circumstances,  
 16      and then to understand the question at hand, which is,  
 17      did -- were they able to do it? Were they able to do  
 18      it relatively quickly? And did they find it  
 19      relatively simple to do?  
 20      Or the -- we could discover the  
 21      opposite as well. Did they find it difficult? And  
 22      then that would help -- help us understand and get a  
 23      whole picture of the simplicity of the cancellation  
 24      flow.  
 25      **Q. So was your intent to use your survey**

148

1       **was not representative of the sample -- of the**  
 2       **match.com user population, would your study results be**  
 3       **applicable to the match.com website?**  
 4       A. So, yes and no. And -- and the reason is,  
 5       obviously our attempt in our study was to, as closely  
 6       as possible, match the actual users involved in --  
 7       that use match.com. So, again, we wanted to be as  
 8       realistic as possible.  
 9       However, it is possible to do a study  
 10      of a system with people who may not perfectly match an  
 11      intended user group and still learn data and gain  
 12      insights and knowledge that is helpful and valid and  
 13      still true, especially when you do it in large  
 14      numbers. In this case they did match fairly closely.  
 15      **Q. And in what metrics or in what measurements,**  
 16      **in what ways did they match closely?**  
 17      **And by "they," in what ways did the**  
 18      **people in your study match the Match population?**  
 19      A. So we found the -- the demographic breakdown  
 20      of match.com users between 2012 and 2022, and then we  
 21      sought to recruit the same demographic breakdown of  
 22      users, and we got fairly close.  
 23      Because we knew we may not get it  
 24      perfect, because we are dependent on external factors  
 25      that out -- are outside of our control, we recruited a

<p style="text-align: right;">149</p> <p>1 very large number of people. And in so doing we were 2 able to offset any small differences that you might 3 have from an under or overrecruit in certain parts of 4 demographics by having sheer numbers of people. We 5 also ensured that they were single and we ensured that 6 they were not familiar with match.com, they had not 7 previously used match.com before.</p> <p><b>Q. In reading your report, I didn't see any statements you made about the demographics of Match's population.</b></p> <p>A. It is there. So -- so here's the -- the age breakdown.</p> <p><b>Q. And when you see "here," can you --</b></p> <p>A. It's on Page 57 at the very top. It begins on 56. The charts below show the age and demographic breakdown of the study participants. This was designed to closely track match.com's actual customer demographic distribution.</p> <p><b>Q. Right. So -- but this data is the data of your study participants; correct?</b></p> <p>A. That is correct.</p> <p><b>Q. Where is the data about Match's actual customer demographic distribution?</b></p> <p>A. I do not believe we provided that in our report.</p>	<p style="text-align: right;">151</p> <p><b>Q. (By Mr. Aijaz) That demographic data, was it members or subscribers?</b></p> <p>A. I do not know if it was members or subscribers. I -- I -- I don't know the answer to that.</p> <p><b>Q. Between those two, which is the more relevant population for the purposes of determining if the cancellation flow is simple?</b></p> <p>A. Ultimately it -- in my opinion, it doesn't really matter. But the closer we could get to subscriber would be a little bit better, but I don't think it would matter all that much.</p> <p><b>Q. Do you think there's a difference in the member and subscriber demographics?</b></p> <p>A. I can't speak to that. I don't know.</p> <p><b>Q. So one of the things you said was -- going back a little bit, you said --</b></p> <p>A. Can I move this? I just want to --</p> <p><b>Q. Yeah, yeah.</b></p> <p>A. -- make sure it's not blocking -- MR. HUMMEL: Take it down.</p> <p>A. -- my phone.</p> <p><b>Q. (By Mr. Aijaz) Yeah. We'll be using it later on, but --</b></p> <p>A. Okay.</p>
<p style="text-align: right;">150</p> <p><b>Q. Did you -- but you had it yourself?</b></p> <p>A. Yes.</p> <p>MR. AIJAZ: Okay. I think that's information we would need.</p> <p>MR. HUMMEL: Repeat what it is again.</p> <p>MR. AIJAZ: Match's demographic data. He used it to basically craft the study to match the actual demographics, but we don't know what the actual demographics are.</p> <p>MR. HUMMEL: Okay. I'll -- I'll look into it.</p> <p>MR. AIJAZ: Thank you.</p> <p><b>Q. (By Mr. Aijaz) And so for the purpose --</b></p> <p>MR. HUMMEL: Do you have it?</p> <p>THE WITNESS: I know the percentages.</p> <p>MR. HUMMEL: I mean, do you have the data that you received?</p> <p>THE WITNESS: From --</p> <p>MR. HUMMEL: From --</p> <p>THE WITNESS: From --</p> <p>MR. HUMMEL: -- either us or Match relating to this demographic data.</p> <p>THE WITNESS: Yes.</p> <p>MR. HUMMEL: Okay. Yeah, we can.</p> <p>MR. AIJAZ: Thank you.</p>	<p style="text-align: right;">152</p> <p>MR. HUMMEL: Okay.</p> <p><b>Q. (By Mr. Aijaz) Yeah. We'll get it out of your way for now, sure.</b></p> <p>So you said that, you know, you could still draw conclusions about the population even if a study sample doesn't perfectly match.</p> <p><b>Did you say something to that effect?</b></p> <p>A. Something to that effect, yes.</p> <p><b>Q. At what point can you not make conclusions about the population data from a unrepresentative study sample?</b></p> <p>A. That depends, and it -- it can be complicated.</p> <p><b>Q. Uh-huh.</b></p> <p>A. And every situation's going to be a little different. In this respect I think the goal is, you try to match it as closely as possible. And as long as you're getting relatively close and you're not seeing inverted spikes and you're seeing similar curves, similar weights and distributions, then you're going to be okay.</p> <p>But, as I said earlier as well, you could potentially test a completely different population of people and still gain insights and learnings and understandings even if they're two</p>

169

1 platform, then -- then there would be -- that would  
 2 not be a factor in what they were doing. So...

3 **Q. Did you compare the subscription sign-up**  
 4 **success rate of your study against the actual Match**  
 5 **population?**

6 A. Did I compare the subscription sign-up  
 7 success rate against the actual match.com population?

8 **Q. Correct.**

9 A. So did I compare the 164 people that  
 10 successfully subscribed to match.com's actual data?

11 **Q. Yes. So the number of people who attempted**  
 12 **to subscribe and are able to on actual match.com**  
 13 **website?**

14 A. No. I don't have those numbers.

15 **Q. Okay. So, I mean, my point here is that it**  
 16 **seems like it's selective for people who are able**  
 17 **to -- to navigate through a more complex process, and**  
 18 **only those who are successfully able to do that were**  
 19 **even in the group who were allowed to try the**  
 20 **cancellation attempts.**

21 **Do you agree with that?**

22 A. I don't. Because, again, it was the exact  
 23 same process to subscribe at match.com on the live  
 24 website as it was to go to match.com and subscribe on  
 25 the live website. They were -- there's literally no

171

1 interface.

2 **Q. Okay. And you didn't check the videos to**  
 3 **see if that was true or not?**

4 A. Again, I didn't review to see why people did  
 5 or didn't do anything regarding cancel. We didn't  
 6 account for errors or anything like that.

7 **Q. Okay.**

8 A. We just coded pass/fail.

9 **Q. After you got your results, did you see how**  
 10 **different demographic groups performed relative to one**  
 11 **another?**

12 **For example, older participants versus**  
 13 **younger participants?**

14 A. Not for this study, no.

15 **Q. Okay. Why not?**

16 A. Not in this report. We included all of the  
 17 people in our results set as a holistic group that  
 18 represents match.com users, and we didn't break them  
 19 down by demographic because all of match.com users  
 20 aren't broken down. They are who they are. So it was  
 21 a comprehensive study of the entire group, and that's  
 22 how usability studies are done.

23 **Q. Do you recall what the average age...**

24 **And so now I'm going to talk about the**  
 25 **actual match.com demographics.**

170

1 difference. The only difference is that we asked them  
 2 to pick a specific subscription, all right. So --  
 3 which is a trivial aspect of -- of that flow. So they  
 4 are in no meaningful way different from one another.

5 **Q. And you know that even though you didn't**  
 6 **review the videos to see why people failed the -- the**  
 7 **subscription task; correct?**

8 A. That is correct. Wait. Ask again, please.

9 **Q. Sure. So you said that apart from the**  
 10 **forced choice of subscription plan that in all other**  
 11 **respects the sign-up process is identical between the**  
 12 **study and the actual website.**

13 **That's -- that's what you testified to;**  
 14 **right?**

15 A. Yeah. The -- what people went through on  
 16 the live website is exactly what people would normally  
 17 go through on -- on their own live website with --  
 18 with the exception is, they would use their own credit  
 19 card and they would pick which plan they want rather  
 20 than the one we told them to pick.

21 **Q. Right. Are you aware that there are users**  
 22 **who were unable to cancel because of the difficulties**  
 23 **imposed by the usertesting.com interface?**

24 A. No. I'm not aware of anybody who struggled  
 25 to subscribe or cancel due to the usertesting.com

171

1 **Do you recall what the average age of**  
 2 **desktop users was?**

3 A. For our target? I can tell you what our  
 4 target recruitment percentages were.

5 Is that what you're asking?

6 **Q. Well, if your target recruitment percentages**  
 7 **were -- were equal to the actual Match demographics,**  
 8 **then I suppose it's the same question. But I don't**  
 9 **know if that is true or not.**

10 A. I know our target percentages -- and, like I  
 11 said, they weren't perfect. Our results weren't --  
 12 weren't a perfect match, but they were relatively  
 13 close.

14 MR. AIJAZ: Okay. Can I see that real  
 15 quick?

16 MR. TEPFER: Sure.

17 MR. AIJAZ: This is -- it's a big --  
 18 relatively big one. We're just going to be looking at  
 19 one demographic look. This is Exhibit 7, I believe.

20 THE REPORTER: 6.

21 MR. AIJAZ: 6.

22 MR. TEPFER: I think the video was 6,

23 wasn't it?

24 THE REPORTER: Oh, that's right.

25 MR. AIJAZ: So that will be passed to

43 (Pages 169 to 172)

189

1 userTesting.com users use the website as a full-time  
 2 job?

3 A. I believe some might do that.

4 Q. Does that change your viewpoint on whether  
 5 that population is representative of the match.com  
 6 user base?

7 A. Not at all. They -- I -- they very  
 8 likely -- lots of people do lots of things from  
 9 lots -- lots of different walks of life, and we can't  
 10 discount globally accepted platforms like  
 11 userTesting.com, with 11 and all its other -- the  
 12 other systems out there because there happen to be  
 13 participants who leverage the system.

14 Because they leverage the system,  
 15 that's how we're able to run these tests. Without  
 16 systems like that and participants like that, studies  
 17 like this would be next to impossible to -- to  
 18 execute.

19 Q. Are you aware that more than 50 percent of  
 20 the users in your study describe themselves as  
 21 advanced internet users?

22 A. I believe it was somewhere around there,  
 23 like median -- like median to advanced. I don't  
 24 remember the exact numbers. It's -- it's in here  
 25 somewhere.

191

1 online service.

2 Q. (By Mr. Aijaz) Are you aware that in order  
 3 to be recruited into a userTesting.com study, you have  
 4 to leave a userTesting.com tab open on your web  
 5 browser?

6 A. I believe that's the case.

7 Q. Does that affect your view of how  
 8 representative your study participants are when  
 9 compared to the match.com user base?

10 A. No.

11 Q. Okay. Paragraph 111, you say that  
 12 cancelling -- let's see. Okay. So on this page, the  
 13 one -- two -- three -- the fourth bullet point you say  
 14 "88.3 percent of participants thought cancelling was  
 15 simple or were at least neutral as to the simplicity/  
 16 difficulty."

17 Why did you include the neutral  
 18 response in this statistic?

19 A. We included that because what we're looking  
 20 for -- again, as we discussed earlier, the task at  
 21 hand, is cancelling on match.com simple is the -- the  
 22 overarching question at play here.

23 There's a gamut, right, there's a  
 24 spectrum. At one level there's -- it's really, really  
 25 easy to do, and then at some point it becomes so

190

1 Q. How does that compare to the expertise of  
 2 internet use of match.com users?

3 A. I'm unaware of the internet expertise of the  
 4 universe of match.com users.

5 Q. Do you think that that's a relevant factor  
 6 when assessing the ability to complete a online task?

7 A. In the case --

8 MR. HUMMEL: What's the "that"? I'm  
 9 sorry.

10 THE WITNESS: I'm sorry.

11 MR. AIJAZ: The level of internet  
 12 expertise.

13 THE WITNESS: In a small case where you  
 14 were working on a -- a very niche kind of thing, I  
 15 think it could be relevant. But with really large  
 16 systems that apply to a really broad range of people,  
 17 match.com, for instance, applies to virtually aged --  
 18 every age demographic over the age of 18, of course,  
 19 within reason, and then therefore encompasses every  
 20 income, every job type, every -- everything, right.

21 So it -- it doesn't attract just tech-  
 22 savvy users or not, though it is safe to say that  
 23 match.com services would attract people who are at  
 24 least moderately comfortable or more with accessing  
 25 and performing activities online because it is an

192

1 difficult that it could be considered illegal, let's  
 2 say. So the question is, how simple is it? And if  
 3 people are not actively saying this is very difficult  
 4 or difficult, meaning they were at least neutral to it  
 5 like "Oh, it was an either way," then we included them  
 6 as somebody saying "Hey, this was simple" or at least  
 7 neutral to it because they're not actively detracting  
 8 from it. They're neutral. It's -- it's not a big  
 9 deal.

10 So -- and the question at -- at hand  
 11 here, is this so not simple it should be illegal, then  
 12 the answer is, no, it's not that difficult because  
 13 88.3 percent of people said it was -- were either  
 14 neutral or -- or very -- responded very positively  
 15 that it was simple or very simple. That's why.

16 (Loud siren outside.)

17 MR. AIJAZ: Okay. Are you okay? Do  
 18 you want us to pause? Yeah.

19 MR. HUMMEL: Would now be an okay time  
 20 for a break?

21 MR. AIJAZ: Yeah, if you need it.

22 THE WITNESS: How long have we been  
 23 going?

24 MR. HUMMEL: 40 minutes.

25 Q. (By Mr. Aijaz) Could we -- could you do one

201

1 think there might have been a mis -- misnumbering.  
 2 It's labeled Paragraph 2, but it's the last full  
 3 paragraph on Page 51.

4 A. So -- oh, interesting. It might have  
 5 been -- yeah. Yeah, okay.

6 Q. So you wrote "There are also memory  
 7 advantages because the cancellation process is like  
 8 the sign-up process. What subscribers learned from  
 9 the sign-up syntax and scheme will help subscribers  
 10 cancel easily;" is that right?

11 A. Yes, that's correct.

12 Q. Can you explain that?

13 A. Yeah. So the subscription flow that users  
 14 have to go through is a -- is a stepped wizard process  
 15 where you're not asked to do a whole bunch of things  
 16 all at once necessarily. Some of them are more  
 17 complicated than others, but essentially the whole  
 18 subscription process is -- is built to take you from  
 19 Task 1 to 2 to 3 to 4, et cetera.

20 And then you can also learn that things  
 21 are skippable, some things are not. You can als --  
 22 and then -- and then once you get into the monetary  
 23 aspect of subscription, then you see your options, the  
 24 styling, the esthetics, and everything you learn along  
 25 the way is teaching you about how this current system

203

1 and how systems and processes flow.

2 Q. Did you --

3 A. That's the in -- that's the indication of  
 4 that statement.

5 Q. Did you evaluate other parts of the  
 6 match.com website?

7 A. No, not in depth.

8 Q. Okay. But it is your opinion that users  
 9 would learn from the subscription process how to  
 10 cancel; correct?

11 A. Not -- not in the way you phrased the  
 12 question. What I said was, what subscribers learned  
 13 from the sign-up syntax and scheme will help  
 14 subscribers cancel easily.

15 So what I'm saying is, there are  
 16 elements in the subscription process and patterns and  
 17 flows and controls and things of that nature that are  
 18 then also used in the cancellation flow. And  
 19 that's -- that's all I'm saying there.

20 Q. Okay. On the subscription confirmation  
 21 page, do you recall that there are instructions on how  
 22 to cancel or a location on telling users where to  
 23 cancel?

24 A. On the page that confirms that they have  
 25 already cancelled?

202

1 is built. And so then when you go to do other things  
 2 in the system, any experience you had with Part A of  
 3 the system will assist you, or it should, in Part B.

4 Q. And so you can use Part A being the  
 5 subscription task, and Part B you're referring to the  
 6 cancellation task; is that fair?

7 A. Yeah.

8 Q. Okay. So is it true that people will be  
 9 more likely to remember what they learned from Part A  
 10 if they do it sooner, if they...

11 Let me rephrase that.

12 The sooner that someone attempts Task  
 13 B, is it more likely that they'll remember what they  
 14 learned from Part A?

15 A. "The sooner" being the time in between --

16 Q. Correct.

17 A. -- those things? Yeah. The more frequently  
 18 you use a system, the more apt you are to be able to  
 19 learn to use other parts of the system.

20 Q. Okay.

21 A. So if I were an active match.com user, I  
 22 would have used a number of parts of the system. Even  
 23 if I subscribed 10 years ago, I'm still using other  
 24 parts of the system on a regular basis. So I'm likely  
 25 familiar with, more or less, where things are and --

204

1 Q. No. On the subscription con -- the users  
 2 are presented with the confirmation page when they  
 3 finish subscribing; correct?

4 A. Oh, on the subscript -- I'm sorry. I  
 5 heard --

6 Q. Yeah.

7 A. -- cancel sub -- cancel confirmation page  
 8 because that's all we've been talking about.

9 Q. Right.

10 A. I'm sorry. Would you please restate that?

11 Q. Sure. You know what? It will be easier to  
 12 do that with the video. It will -- it will make more  
 13 sense --

14 A. Okay.

15 Q. -- to do it that way. So we were at Page  
 16 126 -- or Paragraph 126. I just wanted to ask how you  
 17 calculated this margin of error of .14 at 95 percent  
 18 confidence.

19 Was there a calculator you used or  
 20 Excel?

21 Q. How -- how did you calculate that?

22 A. There is a very complex calculation in order  
 23 to get that -- that confidence interval there, and  
 24 it's not something that lives in my head. It's --  
 25 it's quite complicated, and it is done -- I believe in

241

243

1       **contains the -- the data.**

2       A. It only includes 164?

3       **Q. Yeah.**

4       A. Not all 233?

5       **Q. Right.**

6       A. Oh, okay.

7       **Q. Is SUS reliable?**

8       A. Yes.

9            MR. HUMMEL: Objection. Vague, calls  
10          for a legal conclusion. You can answer.

11       A. In my opinion, very much so. And I -- there  
12          are a lot of studies that support it. Like every --  
13          every study, there are pros and cons on how you use  
14          it. But, you know, I learned about it from  
15          usability.gov and now digital.gov. And, you know, the  
16          federal government loves it apparently. That's how I  
17          learned about it.

18       So -- and we -- we use it accordingly  
19          in virtually every study because it is such a -- a --  
20          a reliable factor that's been used since -- I don't  
21          know -- the 60's, 70's. A long, long time. And it's  
22          very tried and true. So...

23       **Q. (By Mr. Aijaz) Are you aware that the  
24          alternation of posi -- of literature suggesting that  
25          the alternation of positive and negative, which you**

1       MR. HUMMEL: Which one?

2       MR. AIJAZ: The demographic data. Do  
3          you have one?

4       MR. TEPFER: We all have one.

5       MR. HUMMEL: He's got it.

6       MR. TEPFER: But it hasn't been marked.

7       MR. AIJAZ: Okay. Chad, do you need  
8          one?

9       MR. HUMMEL: I don't need it.

10       MR. AIJAZ: Are you good? Okay. So  
11          this is going to be marked Confidential. Actually  
12          could you label -- let's switch because this one has  
13          Confidential written on it. Thank you. And I lost  
14          track of what exhibit we're on.

15       MR. HUMMEL: 8. This will be 8.

16       MR. AIJAZ: Is that right? And would  
17          you be able to mark that to 8...

18       MR. HUMMEL: Sure.

19       MR. AIJAZ: ...or as of Number 8?

20       MR. TEPFER: I think this is 9 because  
21          I think 8 was that video; right?

22       MR. HUMMEL: Oh, you marked the video?  
23          I didn't know.

24       MR. AIJAZ: Yes, I think that's right.

25       MR. TEPFER: So -- I think so. So this

242

244

1       **described earlier, can cause confusion?**

2       A. It can. And, in fact, it's on purpose in  
3          the SUS survey. And the SUS survey is organized in  
4          that way, as -- as you mentioned earlier, as a  
5          preventer for -- for people just running -- running  
6          straight 10's or straight 1's, right. Also, it's  
7          described that way and the questions are worded  
8          accordingly, right.

9       So because the scoring is inverted, you  
10          know, positive, negative, even/odd -- or odd-even -- I  
11          can't remember which -- it's -- the questions are  
12          worded very clearly so that the confusion is  
13          mitigated. And, again, I'm not here to redesign the  
14          SUS survey. It has been tried and true for many, many  
15          decades.

16       MR. AIJAZ: Okay, thank you. We'll --  
17          we'll go off the record and take a little bio break.

18       THE WITNESS: Sweet. Thank you.

19       (Break.)

20       MR. AIJAZ: Okay. We just got through  
21          talking about SUS. Now we'll turn to -- I guess we  
22          might as well talk a little bit about the demographic  
23          data.

24       Did you give us all the copies? Or did  
25          you keep some for yourself?

1       will be 9.

2       MR. AIJAZ: It will be 9. Thank you.  
3          (Exhibit Number 9 marked.)

4       **Q. (By Mr. Aijaz) All right. You've just been  
5          handed what's been marked as Exhibit 9.**

6       **Do you recognize this piece of paper?**

7       A. I recognize the numbers on this piece of  
8          paper.

9       **Q. Okay. Can you tell me what this data is?**

10       A. Yeah. This is the demographic breakdown of  
11          match.com subscribers from 2013 to the present by age  
12          and gender.

13       **Q. And you were -- were you provided this  
14          information prior to the deposition?**

15       A. Yes.

16       **Q. Who provided it to you?**

17       A. I don't recall if it was on a phone call or  
18          an e-mail. I -- I, honestly, don't remember.

19       **Q. Okay. Was it from match.com or someone  
20          working for match.com?**

21       A. I would assume so. That's the only people  
22          that would have access to this data.

23       **Q. Do you have any reason to doubt the  
24          authenticity that this is the subscriber data from  
25          match.com?**

249

1 population to a survey study?

2 A. Not really. Not anything that would be  
3 especially helpful in this case.

4 Q. Okay. I noticed in your survey you had a  
5 cutoff of 70 as an -- as the upper limit for age; is  
6 that right?

7 A. That is correct.

8 Q. Why did you have that cutoff?

9 A. It was the fixed cutoff of usertesting.com.  
10 Their participants either don't record age after 70 or  
11 they don't have people over 70. It's one of the two.  
12 I can't remember which. But recruiting -- basically  
13 you can recruit 55 and up. So -- and I bel -- I don't  
14 think we asked specific ages, just age ranges of the  
15 participants. So there may have been people over, I  
16 think. It's just that was the usertesting.com  
17 constrictions.

18 Q. Okay. Does that affect the applicability of  
19 your study to the match.com survey?

20 A. Not really. We were able to get fairly  
21 close even with the older demographic and -- and  
22 the -- yeah. So it -- it didn't have much effect on  
23 our ability.

24 Q. Okay. On Page -- Paragraph 134 of your  
25 report -- and I'll pause while you get there.

251

1 or manage e-mail notifications;" is that right?

2 A. The Account Settings page, yes, that is  
3 correct.

4 Q. Okay. Did you -- do you know how many  
5 people -- what percentage of people fall into that  
6 bucket of visiting Account Settings to change the  
7 password or manage e-mail notifications?

8 A. I do not.

9 Q. Did you ask for that data?

10 A. I did not.

11 Q. Why not?

12 A. I was not studying the password changes.

13 The focus of my study was, when someone intends to  
14 cancel, then let's look at their data, look -- look at  
15 what they were able to do or -- or not able to do.

16 Q. Okay. You go on to say "Or the subscriber  
17 could have visited the Manage Subscription page to  
18 view Subscription Status."

19 You don't know how many people fall  
20 into that bucket, do you?

21 A. There may have been data about that. I  
22 don't -- I don't know what it is. That may have been  
23 provided in the data that we all have access to, but I  
24 didn't -- I didn't tabulate it or calculate it because  
25 it was irrelevant to what I was trying to -- to

250

1 A. Yeah.

2 Q. You have a footnote saying those who clicked  
3 cancel -- that those who clicked Cancel Subscription  
4 button that leads to the first survey page -- I'm  
5 going to just read it. Footnote 9, Page 71, "I  
6 consider this the appropriate page at which to treat a  
7 subscriber as entering the cancellation flow."

8 Could you review this and tell me what  
9 you mean by this is the appropriate page?

10 Which page are you referring to here?

11 A. Yes. This is referring to the analysis of  
12 match.com subscriber data, so this is not my usability  
13 study. So in here we had to determine, at what point  
14 in the user clicking around on the website can we be  
15 pretty confident that they intend to cancel? And we  
16 determined that that page is when they click Cancel  
17 Subscription, and then the first thing they'll see is  
18 that first survey question.

19 Q. Okay. Now, anyone who wanted to cancel  
20 would have had to click onto the Account Settings page  
21 and the Manage Subscription page as well; correct?

22 A. That is correct.

23 Q. And you say that -- and, again, this is  
24 Footnote 9 -- "The subscriber could have visited the  
25 Account Settings page to change their account password

252

1 answer.

2 Q. Earlier we looked at a version of a flow  
3 that had Subscription Status as -- a link to  
4 Subscription Status outside of the Account Settings  
5 page; is that right?

6 A. In the video?

7 Q. Yes. Let me reform that because I think I  
8 stated that wrong.

9 So there was in the video that we saw a  
10 des -- a depiction of a flow where there was a link to  
11 Subscription Status outside of the Manage Subscription  
12 page.

13 Do you recall that?

14 A. I do.

15 Q. At that time, if a user wanted to view their  
16 Subscription Status, would they have clicked on the  
17 link to cancel their subscription or to view  
18 Subscription Status?

19 A. The beginning of your question, did you say  
20 if they wanted to view their Sub -- Subscription  
21 Status?

22 Q. Correct.

23 A. Yeah. They would click View Subscription  
24 Status, I believe was applied.

25 Q. So at that time the users who clicked Change

293

1 the site requires entering the old password first."  
 2 Do you see that?  
 3 A. I'm sorry. Which paragraph are you in?  
 4 Q. 38.  
 5 A. 38. Thank you.  
 6 Q. I'll -- I'll re-ask the question.  
 7 You say that setting a new password  
 8 requires entering an old password; right?  
 9 A. Setting a new password requires entering the  
 10 subscriber's current password first. Okay.  
 11 Q. So was that always true on the Match  
 12 website?  
 13 A. On this partic -- on this particular one I  
 14 don't know. I didn't review historical versions of  
 15 the password change.  
 16 Q. Did you ask whether this was always the  
 17 case?  
 18 A. I did not.  
 19 Q. Would your opinion change if this  
 20 requirement to enter the current password was not  
 21 always present?  
 22 A. Ah. I think I see what you're saying.  
 23 That -- okay. Would my opinion change if -- well, my  
 24 opinion, whether or not it was factually correct or  
 25 incorrect, would change, right. Because if she's

295

1 A. Uh-huh. Okay.  
 2 Q. So in this footnote -- again, it's Footnote  
 3 24 -- you discuss looking at session level data and  
 4 how 57.58 percent -- percent of sessions reached the  
 5 first survey page; is that right?  
 6 A. Yes.  
 7 Q. Did you look to see how that percentage  
 8 changed over time?  
 9 A. I did not. As I mentioned earlier, the bulk  
 10 of my study refers to the subscriber level data,  
 11 and -- and -- and it's a combination of the years 2012  
 12 through 2022. The specific poll out of this was in  
 13 reference to the fact that she was referencing that  
 14 block of data. So, yeah.  
 15 Q. You said 2012. Did you mean 2013?  
 16 A. I believe the data that we had was from '12  
 17 to '22. I thought it was a 10-year span. I could be  
 18 wrong.  
 19 Q. Well, when you were looking at subscriber  
 20 level data, did you ever assess how those percentages  
 21 changed over time?  
 22 A. How they changed over time? From year over  
 23 year versus --  
 24 Q. Year over year or month over month, yeah.  
 25 A. No. I did all my calculations

294

1 referring to a historical version, then okay. But the  
 2 fact is, the current one does not. So...  
 3 Q. Paragraph 39, you say that changing an  
 4 e-mail requires even greater superiority controls and  
 5 that it's also true for age.  
 6 Do you see that?  
 7 A. Uh-huh, yes.  
 8 Q. Was that always the case?  
 9 A. I do not know.  
 10 Q. Did you ask if the -- editing those pieces  
 11 of information always required greater controls?  
 12 A. I did not.  
 13 Q. Why not?  
 14 A. It did not seem relevant.  
 15 Q. Paragraph 42, which is Page 17, has a  
 16 footnote. Let's see -- a footnote -- that's not  
 17 right. Oh, okay. It's actually -- so Paragraph 42  
 18 spans Pages 17 and 18. If you want to read that, I  
 19 have a question about Footnote 24, which is at the end  
 20 of the -- at the end of the paragraph.  
 21 A. Okay.  
 22 Q. So --  
 23 A. And I haven't read the footnote yet, but --  
 24 Q. Okay. Yeah. If you want to take a moment  
 25 and read it, just let me know when you're done.

296

1 commentatorially.  
 2 Q. And by that you mean you aggregated it  
 3 across all available time periods?  
 4 A. Correct.  
 5 Q. So you're aware that there were different  
 6 versions over -- of the flow over time; correct?  
 7 A. Correct.  
 8 Q. Did you consider seeing if the different  
 9 versions of the flow affected, for example, how many  
 10 people were able to subscribe at different times?  
 11 A. As I have mentioned in my heuristic  
 12 analysis, I did look at the changes. So after my  
 13 analysis of the live current version of the website --  
 14 which is the most successful. Anybody can get there,  
 15 and that's what's live today. It's the most relevant.  
 16 Then I went back to see what changes  
 17 had been made over time. And did those changes bear  
 18 any -- were they big enough, were they dramatic  
 19 enough, drastic enough to change any of the opinions  
 20 that I had formulated, and I found that they did not.  
 21 Q. And what was the basis for your opinion on  
 22 the magnitude of these changes?  
 23 A. As we discussed earlier, everything being  
 24 rela -- relative, the changes in and of themselves  
 25 were -- sorry -- small enough or inconsequential

297

299

1 enough or either better or -- or whatever, that  
 2 whether or not it pushed the needle up or down, it  
 3 was, in my expert opinion, a small enough value that  
 4 it would not change my opinion on the overall  
 5 simplicity question at hand.

6 **Q. Haven't you testified today that that type**  
 7 **of heuristic analysis is just an opinion unless it's**  
 8 **supported by empirical data?**

9 A. Heuristic opinions, heuristic analyses are  
 10 just opinions. They're expert opinions, but at the  
 11 end of the day they are just opinions. That's why I  
 12 insisted that we did a usability study. Otherwise,  
 13 you just have battling expert opinions, and everybody  
 14 has one of those.

15 **Q. And didn't you have data, historical data,**  
 16 **available with which you could have used to evaluate**  
 17 **prior versions of the flow?**

18 A. Looking at each year in -- in isolation  
 19 could give you some indication of some things. The  
 20 problem with just looking at historical data is, you  
 21 don't know why for anything. You don't know the  
 22 context.

23 As I mention here, you don't even  
 24 know -- we can -- for the -- in Footnote 24, for the  
 25 sessions that didn't result in cancellation, we can

1 **Q. And then at another time it changed to --**  
 2 **Change/Cancel Subscription and then it changed to**  
 3 **Manage Subscription.**

4 A. Yes.

5 **Q. And I asked your opinion on whether any of**  
 6 **those versions would be more clear to a user.**

7 **And is it correct that you've testified**  
 8 **you had no opinion as to that question?**

9 A. Well, I have an opinion, but I cannot render  
 10 it in good conscience. I'm -- it would be hypothesis  
 11 and it's out of the scope of what I've been asked to  
 12 do here today.

13 **Q. So what is your opinion on that?**

14 MR. HUMMEL: Objection, outside the  
 15 scope.

16 A. It's irrelevant to the case, and I -- I -- I  
 17 don't feel comfortable sharing it. It's not in the  
 18 scope. It's not my assignment. It's not why I'm  
 19 here.

20 **Q. (By Mr. Aijaz) I understand that. And I**  
 21 **understand, you know, Chad can also object to**  
 22 **relevance the next time I ask this because I'm about**  
 23 **it.**

24 **Putting aside your concerns about**  
 25 **relevance, what is your opinion that you just**

298

300

1 only guess the cause. We have no idea. And the  
 2 subscriber may have successfully entered a password,  
 3 but didn't cancel for any number of reasons. And I  
 4 hypothesize a few, but that's all we can do.

5 So that's why we can't rely only on  
 6 those bits of data. So we bring them into an  
 7 aggregate and use those to understand, you know, the  
 8 things as a whole. But, again, it's just one piece of  
 9 the pie. You've got the heuristic analysis, you've  
 10 got empirical data, you've got Match data, you have  
 11 comparative analyses, and then altogether you can form  
 12 a cogent picture of what's actually going on.

13 Sometimes your study is going to refute  
 14 your -- your expert opinion, and you have to be  
 15 prepared for that. And that's why I insisted we do  
 16 one.

17 **Q. So earlier we talked about language that**  
 18 **took users to the Manage Subscription page.**

19 **Do you recall that conversation?**

20 A. The language that took users to the Manage  
 21 Subscription page. When we looked at the video?

22 **Q. At different times. It was also in the**  
 23 **video. Specifically I'm talking about a link that at**  
 24 **one point was labeled Change/Cancel Membership.**

25 A. Okay. I'm aware that it once read that.

1 **testified that you have about how -- the relative**  
 2 **clarity of those three different versions?**

3 MR. HUMMEL: Objection, outside the  
 4 scope. He's not going to offer that opinion at trial.  
 5 It's not discoverable.

6 A. I was not asked to redesign match.com. And  
 7 I'm not here to opine on -- on things I have no data  
 8 to support.

9 **Q. (By Mr. Aijaz) And you could have looked to**  
 10 **see how Match's population -- how their behavior**  
 11 **changed over time in correspondence to those changes;**  
 12 **correct?**

13 MR. HUMMEL: Objection. Hypothetical,  
 14 no foundation, beyond the scope.

15 A. If the data's there, one could ostensibly  
 16 look at it.

17 **Q. (By Mr. Aijaz) You did have Match**  
 18 **population data on a monthly basis from either 2012 or**  
 19 **2013 to almost the current period; correct?**

20 A. I believe so, yes.

21 **Q. And you did not analyze how Match's behavior**  
 22 **changed -- Match users' behavior changed over time in**  
 23 **response to changes to the cancellation flow, did you?**

24 A. I did not.

25 **Q. Okay. I'm going to -- you'll be handed**

75 (Pages 297 to 300)

333

335

1           **How did you interpret potential  
2 problems?**

3           A. I interpret that as to basically what I do  
4 in the -- in the line of what I do in my work every  
5 day, which is solve them, right, which is the creation  
6 of new design to enhance or change something. So,  
7 again, that wasn't part of my assignment, to redesign  
8 the flow. So that's how I interpreted that.

9           **Q. Was it part of your assignment to suggest  
10 ways to improve the flow or make it simpler?**

11          A. No.

12          **Q. Was it part of your assignment to solve what  
13 you viewed as potential problems?**

14          A. No.

15          MR. HUMMEL: Okay. I don't have  
16 anything further.

17          MR. AIJAZ: All right. We're done.  
18 Thanks so much.

19          MR. HUMMEL: All right. Thank you,  
20 guys. Off the record.

21          (Deposition concluded: 6:17 p.m.)

1           I, BRANDON WARD, have read the foregoing  
2 deposition and hereby affix my signature that same is  
3 true and correct, except as noted above.

4  
5  
6           \_\_\_\_\_  
7           BRANDON WARD  
8           THE STATE OF \_\_\_\_\_ )  
9           COUNTY OF \_\_\_\_\_ )

10          Before me, \_\_\_\_\_, on  
11 this day personally appeared BRANDON WARD, known to me  
12 (or proved to me under oath or through  
13 \_\_\_\_\_) (description of identity card or  
14 other document) to be the person whose name is  
15 subscribed to the foregoing instrument and acknowledged  
16 to me that they executed the same for the purposes and  
17 consideration therein expressed.

18          Given under my hand and seal of office this  
19          \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.  
20  
21  
22  
23

24           \_\_\_\_\_  
25           NOTARY PUBLIC IN AND FOR  
THE STATE OF \_\_\_\_\_  
COMMISSION EXPIRES: \_\_\_\_\_

334

336

1           CHANGES AND SIGNATURE  
2           WITNESS NAME: BRANDON WARD  
3           DATE: JULY 13, 2023

4           PAGE LINE   CHANGE   REASON  
5          \_\_\_\_\_  
6          \_\_\_\_\_  
7          \_\_\_\_\_  
8          \_\_\_\_\_  
9          \_\_\_\_\_  
10         \_\_\_\_\_  
11         \_\_\_\_\_  
12         \_\_\_\_\_  
13         \_\_\_\_\_  
14         \_\_\_\_\_  
15         \_\_\_\_\_  
16         \_\_\_\_\_  
17         \_\_\_\_\_  
18         \_\_\_\_\_  
19         \_\_\_\_\_  
20         \_\_\_\_\_  
21         \_\_\_\_\_  
22         \_\_\_\_\_  
23         \_\_\_\_\_  
24         \_\_\_\_\_  
25         \_\_\_\_\_

1           IN THE UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF TEXAS  
DALLAS DIVISION  
FEDERAL TRADE COMMISSION, )

4           Plaintiff, ) CASE ACTION NO.  
5           v. ) 3:19-cv-02281-K  
6           MATCH GROUP, INC., a )  
corporation, and MATCH )  
7           GROUP, LLC, formerly known )  
as MATCH.COM, LLC, a )  
8           limited liability company, )

9           Defendants. )  
10          REPORTER'S CERTIFICATION  
11          DEPOSITION OF BRANDON WARD  
12          JULY 13, 2023

13          I, Brent Sturgess, Certified Shorthand Reporter in  
14 and for the State of Texas, hereby certify to the  
15 following:

16          That the witness, BRANDON WARD, was duly sworn by  
17 the officer and that the transcript of the oral  
18 deposition is a true record of the testimony given by  
19 the witness;

20          That the deposition transcript was submitted on  
21 August 2, 2023 to the witness or to the attorney  
22 for the witness for examination, signature and return to  
23 me by August 22, 2023;

24          That the amount of time used by each party at the  
25 deposition is as follows:

84 (Pages 333 to 336)



## Heuristic Evaluations and Expert Reviews

In a heuristic evaluation, usability experts review your site's interface and compare it against accepted usability principles. The analysis results in a list of potential usability issues.

### Advantages and Disadvantages of Heuristics

A heuristic evaluation should not replace usability testing. Although the heuristics relate to criteria that affect your site's usability, the issues identified in a heuristic evaluation are different than those found in a usability test.

Advantages	Disadvantages
<ul style="list-style-type: none"><li>• It can provide some quick and relatively inexpensive feedback to designers.</li><li>• You can obtain feedback early in the design process.</li><li>• Assigning the correct heuristic can help suggest the best corrective measures to designers.</li><li>• You can use it together with other usability testing methodologies.</li><li>• You can conduct <a href="#">usability testing</a> to further examine potential issues.</li></ul>	<ul style="list-style-type: none"><li>• It requires knowledge and experience to apply the heuristics effectively.</li><li>• Trained usability experts are sometimes hard to find and can be expensive.</li><li>• You should use multiple experts and aggregate their results.</li><li>• The evaluation may identify more minor issues and fewer major issues.</li></ul>

### Nielsen's Heuristics

Though many groups have developed heuristics, one of the best-known sources is the set developed by Nielsen's in 1994. Nielsen refined the list originally developed in 1990 by himself and Rolf Molich. Nielsen's Heuristics include:

- **Visibility of system status:** The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.
- **Match between system and the real world:** The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.
- **User control and freedom:** Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.
- **Consistency and standards:** Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

• **Error prevention:** Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

• **Recognition rather than recall:** Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

• **Flexibility and efficiency of use:** Accelerators—unseen by the novice user—may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

• **Aesthetic and minimalist design:** Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

• **Help users recognize, diagnose, and recover from errors:** Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

• **Help and documentation:** Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

## Expert Reviews

In an expert review, the reviewers already know and understand the heuristics. Because of this, reviewers do not use a specific set of heuristics. As a result, the expert review tends to be less formal, and they are not required to assign a specific heuristic to each potential problem.

## References

Molich, R. and Nielsen, J., Improving a human-computer dialogue, Communications of the ACM, 33(3), 338-348, (1990).

Nielsen, J., Enhancing the explanatory power of usability heuristics, CHI'94 Conference Proceedings, (1994).

---

BILLING CODE 6750-01-P

**FEDERAL TRADE COMMISSION**

**16 CFR Part 425**

**RIN 3084-AB60**

**Negative Option Rule**

**AGENCY:** Federal Trade Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The Federal Trade Commission (“FTC” or “Commission”) seeks public comment on proposed amendments to the Commission’s Negative Option Rule (or “Rule”) to combat unfair or deceptive practices that include recurring charges for products or services consumers do not want and cannot cancel without undue difficulty.

**DATES:** Written comments must be received on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]. Parties interested in presenting views orally should submit a request to do so as explained below, and such requests must be received on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

**ADDRESSES:** Interested parties may file a comment online or on paper, by following the instructions in the Request for Comment part of the **SUPPLEMENTARY INFORMATION** section below. Write “Negative Option Rule; Project No. P064202” on your comment and file your comment online through <https://www.regulations.gov>. If you prefer to file your comment on paper, mail your comment to the following address: Federal Trade Commission, Office of the Secretary, 600 Pennsylvania Avenue NW, Suite CC-5610 (Annex N), Washington, DC 20580.

**FOR FURTHER INFORMATION CONTACT:** Hampton Newsome, Attorney, (202) 326-2889, Division of Enforcement, Bureau of Consumer Protection, Federal Trade Commission, 600 Pennsylvania Avenue NW, Washington, DC 20580.

**SUPPLEMENTARY INFORMATION:**

**I. Overview**

The Commission seeks comment on a proposal to improve its existing regulations for negative option programs. These programs are widespread in the marketplace and can provide substantial benefits for sellers and consumers. However, consumers cannot reap these benefits when marketers fail to make adequate disclosures, bill consumers without their consent, or make cancellation difficult or impossible. Problematic negative option practices have remained a persistent source of consumer harm for decades, saddling shoppers with recurring payments for products and services they never intended to purchase or did not want to continue buying. In the past, the Commission sought to address these practices through individual law enforcement cases and a patchwork of laws and regulations. Nevertheless, problems persist, and consumers continue to submit thousands of complaints to the FTC each year.

To solicit input about these issues, the Commission published an Advance Notice of Proposed Rulemaking (ANPR) on October 2, 2019 (84 FR 52393). After reviewing the comments received in response and issuing an “Enforcement Policy Statement Regarding Negative Option Marketing” on November 4, 2021 (86 FR 60822), the Commission, as detailed in this document, now proposes to amend the existing Rule to implement new requirements to provide important information to consumers, obtain consumers’ express informed consent, and ensure consumers can easily cancel these programs when they

choose. All of these proposed changes would be applicable to all forms of negative option marketing in all media (*e.g.*, telephone, Internet, traditional print media, and in-person transactions).<sup>1</sup>

## **II. Negative Option Marketing**

Negative option offers come in a variety of forms, but all share a central feature: each contain a term or condition that allows a seller to interpret a customer’s silence, or failure to take an affirmative action, as acceptance of an offer.<sup>2</sup> Before describing the proposed amendments, it is helpful to review the various forms such an offer can take. Negative option marketing generally falls into four categories: prenotification plans, continuity plans, automatic renewals, and free trial (*i.e.*, free-to-pay or nominal-fee-to-pay) conversion offers.

Prenotification plans are the only negative option practice currently covered by the Commission’s Negative Option Rule. Under such plans (*e.g.*, book-of-the-month clubs), sellers provide periodic notices offering goods to participating consumers and then send—and charge for—those goods only if the consumers take no action to decline the offer. The periodic announcements and shipments can continue indefinitely. In continuity plans, consumers agree in advance to receive periodic shipments of goods or provision of services (*e.g.*, bottled water delivery), which they continue to receive until

---

<sup>1</sup> The Commission proposes to issue such amendments pursuant to Section 18 of the FTC Act, which authorizes the Commission to promulgate rules specifying acts or practices in or affecting commerce which are unfair or deceptive. 15 U.S.C. 57a(a)(2).

<sup>2</sup> The Commission’s Telemarketing Sales Rule defines a negative option feature as a provision in an offer or agreement to sell or provide any goods or services “under which the customer’s silence or failure to take an affirmative action to reject goods or services or to cancel the agreement is interpreted by the seller as acceptance of the offer.” 16 CFR 310.2(w).

they cancel the agreement. In automatic renewals, sellers (*e.g.*, a magazine publisher, credit monitoring service provider, etc.) automatically renew consumers' subscriptions when they expire, unless consumers affirmatively cancel the subscriptions. Finally, with free trial marketing, consumers receive goods or services for free (or at a nominal fee) for a trial period. After the trial period, sellers automatically begin charging a fee (or higher fee) unless consumers affirmatively cancel or return the goods or services.

Some negative option offers include upsell or bundled offers, where sellers use consumers' billing data to sell additional products from the same seller or pass consumers' billing data to a third party for their sales. An upsell occurs when a consumer completes a first transaction and then receives a second solicitation for an additional product or service. A bundled offer occurs when a seller packages two or more products or services together so they cannot be purchased separately.

### **III. FTC's Current Negative Option Rule**

The Commission first promulgated the Rule in 1973 pursuant to the FTC Act, 15 U.S.C. 41 *et seq.*, finding some negative option marketers committed unfair and deceptive practices that violated Section 5 of the Act, 15 U.S.C. 45. The Rule applies only to prenotification plans for the sale of goods, and therefore, does not reach most modern negative option marketing.<sup>3</sup>

The current Rule requires prenotification plan sellers to disclose their plan's material terms clearly and conspicuously before consumers subscribe. It enumerates

---

<sup>3</sup> The Rule defines "negative option plan" narrowly to apply only to prenotification plans. 16 CFR 425.1(c)(1). In 1998, the Commission clarified the Rule's application to such plans in all media, stating that it "covers all promotional materials that contain a means for consumers to subscribe to prenotification negative option plans, including those that are disseminated through newer technologies." 63 FR 44555, 44561 (Aug. 20, 1998).

seven material terms sellers must disclose: (1) how subscribers must notify the seller if they do not wish to purchase the selection; (2) any minimum purchase obligations; (3) the subscribers' right to cancel; (4) whether billing charges include postage and handling; (5) that subscribers have at least ten days to reject a selection; (6) that if any subscriber is not given ten days to reject a selection, the seller will credit the return of the selection and postage to return the selection, along with shipping and handling; and (7) the frequency with which announcements and forms will be sent.<sup>4</sup> In addition, sellers must provide particular periods during which they will send introductory merchandise, give consumers a specified period to respond to announcements, provide instructions for rejecting merchandise in announcements, and promptly honor written cancellation requests.<sup>5</sup>

#### **IV. Other Current Regulatory Requirements**

Several other statutes and regulations also address harmful negative option practices. First, Section 5 of the FTC Act, which prohibits unfair or deceptive acts or practices, has traditionally served as the Commission's primary mechanism for addressing deceptive negative option claims. Additionally, the Restore Online Shoppers' Confidence Act ("ROSCA"), 15 U.S.C. 8401-8405, the Telemarketing Sales Rule, 16 CFR Part 310, the Postal Reorganization Act (*i.e.*, the Unordered Merchandise Statute), 39 U.S.C. 3009, and the Electronic Fund Transfer Act ("EFTA"), 15 U.S.C. 1693-1693r, all address various aspects of negative option marketing. ROSCA, however, is the only law primarily designed to do so.

##### **A. Section 5 of the FTC Act**

---

<sup>4</sup> 16 CFR 425.1(a)(1)(i)-(vii).

<sup>5</sup> 16 CFR 425.1(a)(2) and (3); 425.1(b).

Section 5(a) of the FTC Act, 15 U.S.C. 45(a), is the core consumer protection statute enforced by the Commission. That section broadly addresses “unfair or deceptive acts or practices” but has no provisions that specifically address negative option marketing.<sup>6</sup> Therefore, in guidance and cases, the FTC has highlighted five basic Section 5 requirements that negative option marketing must follow to avoid deception.<sup>7</sup> First, marketers must disclose the material terms of a negative option offer including, at a minimum: the existence of the negative option offer; the offer’s total cost; the transfer of a consumer’s billing information to a third party, if applicable; and how to cancel the offer. Second, Section 5 requires that these disclosures be clear and conspicuous. Third,

---

<sup>6</sup> Under the FTC Act, “unfair or deceptive acts or practices” include acts or practices involving foreign commerce that cause or are likely to cause reasonably foreseeable injury within the United States or involve material conduct occurring within the United States. 15 U.S.C. 45(a)(4)(A). Section 5(n) of the FTC Act provides that “unfair” practices are those that cause or are likely “to cause substantial injury to consumers which is not reasonably avoidable by consumers themselves and not outweighed by countervailing benefits to consumers or to competition.” 15 U.S.C. 45(n).

<sup>7</sup> See *Negative Options: A Report by the Staff of the FTC’s Division of Enforcement*, 26-29 (Jan. 2009), <https://www.ftc.gov/sites/default/files/documents/reports/negative-options-federal-trade-commission-workshop-analyzing-negative-option-marketing-report-staff/p064202negativeoptionreport.pdf>. In discussing the five principal Section 5 requirements related to negative options, the report cites to the following pre-ROSCA cases, *FTC v. JAB Ventures*, No. CV08-04648 (C.D. Cal. 2008); *FTC v. Complete Weightloss Center*, No. 1:08cv00053 (D.N.D. 2008); *FTC v. Berkeley Premium Nutraceuticals*, No. 1:06cv00051 (S.D. Ohio 2006); *FTC v. Think All Publ’g*, No. 4:07cv11 (E.D. Tex. 2006); *FTC v. Hispanexo*, No. 1:06cv424 (E.D. Va. 2006); *FTC v. Consumerinfo.com*, No. SACV05-801 (C.D. Cal. 2005); *FTC v. Conversion Mktg.*, No. SACV04-1264 (C.D. Cal. 2004); *FTC v. Mantra Films*, No. CV03-9184 (C.D. Cal. 2003); *FTC v. Preferred Alliance*, No. 103-CV0405 (N.D. Ga. 2003); *United States v. Prochnow*, No. 102-CV-917 (N.D. Ga. 2002); *FTC v. Ultralife Fitness, Inc.*, No. 2:08-cv-07655-DSF-PJW (C.D. Cal. 2008); *In the Matter of America Isuzu Motors*, FTC Docket No. C-3712 (1996); *FTC v. Universal Premium Services*, No. CV06-0849 (C.D. Cal. 2006); *FTC v. Remote Response*, No. 06-20168 (S.D. Fla. 2006). The report also cited the FTC’s previously issued guidance, *Dot Com Disclosures* (2002), archived at <https://www.ftc.gov/sites/default/files/attachments/press-releases/ftc-staff-issues-guidelines-internet-advertising/0005dotcomstaffreport.pdf>.

sellers must disclose the material terms of the negative option offer before consumers agree to the purchase. Fourth, marketers must obtain consumers' consent to such offers.

Finally, marketers must not impede the effective operation of promised cancellation procedures and must honor cancellation requests that comply with such procedures.

Although these basic guidelines are useful, the legality of a particular negative option depends on an individualized assessment of the advertisement's net impression and the marketer's business practices. In addition to these deception-based requirements, the Commission has repeatedly stated billing consumers without consumers' express informed consent is an unfair act under the FTC Act.<sup>8</sup>

## B. ROSCA

Enacted by Congress in 2010 to address ongoing problems with online negative option marketing, ROSCA contains general provisions related to disclosures, consent, and cancellation.<sup>9</sup> ROSCA prohibits charging or attempting to charge consumers for goods or services sold on the Internet through any negative option feature unless the marketer: (1) clearly and conspicuously discloses all material terms of the transaction before obtaining the consumer's billing information, regardless of whether a material term directly relates to the terms of the negative option offer;<sup>10</sup> (2) obtains a consumer's express informed consent before charging the consumer's account; and (3) provides

---

<sup>8</sup> Courts have found unauthorized billing to be unfair under the FTC Act. See, e.g., *FTC v. Neovi, Inc.*, 604 F.3d 1150, 1157-59 (9th Cir. 2010), amended by 2010 WL 2365956 (9th Cir. June 15, 2010); *FTC v. Amazon.com, Inc.*, No. C14-1038-JCC, 2016 WL 10654030, at \*8 (W.D. Wash. Apr. 26, 2016); *FTC v. Ideal Fin. Sols., Inc.*, No. 2:13-CV-00143-JAD, 2015 WL 4032103, at \*8 (D. Nev. June 30, 2015).

<sup>9</sup> 15 U.S.C. 8401-8405.

<sup>10</sup> See *In re: MoviePass, Inc.*, No. C-4751 (Oct. 5, 2021).

simple mechanisms for the consumer to stop recurring charges.<sup>11</sup> ROSCA, however, does not prescribe specific steps marketers must follow to comply with these provisions.

ROSCA also addresses offers made by, or on behalf of, third-party sellers during, or immediately following, a transaction with an initial merchant.<sup>12</sup> In connection with these offers, ROSCA prohibits post-transaction, third-party sellers from charging or attempting to charge consumers unless the seller: (1) before obtaining billing information, clearly and conspicuously discloses the offer's material terms; and (2) receives the consumer's express informed consent by obtaining the consumer's name, address, contact information, as well as the full account number to be charged, and requiring the consumer to perform an additional affirmative action indicating consent.<sup>13</sup> ROSCA also prohibits initial merchants from disclosing billing information to any post-transaction third-party seller for use in any Internet-based sale of goods or services.<sup>14</sup>

Furthermore, a violation of ROSCA is a violation of a Commission trade regulation rule under Section 18 of the FTC Act.<sup>15</sup> Thus, the Commission may seek a variety of remedies for violations of ROSCA, including civil penalties under Section 5(m)(1)(A) of the FTC Act;<sup>16</sup> injunctive relief under Section 13(b) of the FTC Act;<sup>17</sup> and

---

<sup>11</sup> 15 U.S.C. 8403. ROSCA incorporates the definition of “negative option feature” from the Commission’s Telemarketing Sales Rule, 16 CFR 310.2(w).

<sup>12</sup> ROSCA defines “post-transaction third-party seller” as a person other than the initial merchant who sells any good or service on the Internet and solicits the purchase on the Internet through an initial merchant after the consumer has initiated a transaction with the initial merchant. 15 U.S.C. 8402(d)(2).

<sup>13</sup> 15 U.S.C. 8402(a).

<sup>14</sup> 15 U.S.C. 8402(b).

<sup>15</sup> 15 U.S.C. 8404 (citing Section 18 of the FTC Act, 15 U.S.C. 57a).

<sup>16</sup> 15 U.S.C. 45(m)(1)(A).

<sup>17</sup> 15 U.S.C. 53(b).

consumer redress, damages, and other relief under Section 19 of the FTC Act.<sup>18</sup>

Although Congress charged the Commission with enforcing ROSCA, it did not direct the FTC to promulgate implementing regulations.

### **C. Telemarketing Sales Rule**

The Telemarketing Sales Rule (“TSR”), 16 CFR Part 310, prohibits deceptive telemarketing acts or practices, including those involving negative option offers, and certain types of payment methods common in deceptive negative option marketing. The TSR only applies to negative option offers made over the telephone. Specifically, the TSR requires telemarketers to disclose all material terms and conditions of the negative option feature, including the need for affirmative consumer action to avoid the charges, the date (or dates) the charges will be submitted for payment, and the specific steps the customer must take to avoid the charges. It also prohibits telemarketers from misrepresenting such information and contains specific requirements related to payment authorization.<sup>19</sup>

### **D. Other Relevant Requirements**

EFTA<sup>20</sup> and the Unordered Merchandise Statute also contain provisions relevant to negative option marketing.<sup>21</sup> EFTA prohibits sellers from imposing recurring charges on a consumer’s debit cards or bank accounts without written authorization.<sup>22</sup> The

---

<sup>18</sup> 15 U.S.C. 57b(a)(1), (b).

<sup>19</sup> 16 CFR 310.3(a).

<sup>20</sup> 15 U.S.C. 1693-1693r.

<sup>21</sup> 39 U.S.C. 3009.

<sup>22</sup> EFTA provides that the Commission shall enforce its requirements, except to the extent that enforcement is specifically committed to some other federal government agency, and that a violation of any of its requirements shall be deemed a violation of the FTC Act. Accordingly, the Commission has authority to seek injunctive relief for EFTA violations, just as it can seek injunctive relief for other Section 5 violations.

Unordered Merchandise Statute provides that mailing unordered merchandise, or a bill for such merchandise, constitutes an unfair method of competition and an unfair trade practice in violation of Section 5 of the FTC Act.<sup>23</sup>

## V. Limitations of Existing Regulatory Requirements

The existing patchwork of laws and regulations does not provide industry and consumers with a consistent legal framework across media and offers. For instance, as discussed above, the current Rule does not cover common practices such as continuity plans, automatic renewals, and trial conversions.<sup>24</sup> In addition, ROSCA and the TSR do not address negative option plans in all media—ROSCA’s general statutory prohibitions against deceptive negative option marketing only apply to Internet sales, and the TSR’s more specific provisions only apply to telemarketing. Yet, harmful negative option practices that fall outside of ROSCA and the TSR’s coverage still occur.<sup>25</sup>

Additionally, the current framework does not provide clarity about how to avoid deceptive negative option disclosures and procedures. For example, ROSCA lacks specificity about cancellation procedures and the placement, content, and timing of cancellation-related disclosures. Instead, the statute requires marketers to provide “simple

---

<sup>23</sup> The Commission has authority to seek the same remedies for violations of the Unordered Merchandise Statute that it can seek for other Section 5 violations. The Commission can seek civil penalties pursuant to Section 5(m)(1)(B) of the FTC Act from violators who have actual knowledge that the Commission has found mailing unordered merchandise unfair. 15 U.S.C. 45(m)(1)(B).

<sup>24</sup> Indeed, the prenotification plans covered by the Rule represent only a small fraction of negative option marketing. In 2017, for instance, the Commission estimated that fewer than 100 sellers (“clubs”) were subject to the current Rule’s requirements. 82 FR 38907, 38908 (Aug. 16, 2017).

<sup>25</sup> For instance, the Commission recently brought two cases under Section 5 involving negative option plans that did not involve either Internet sales or telemarketing. *FTC and State of Maine v. Health Research Labs., LLC*, No. 2:17-cv-00467-JDL (D. Me. 2018); and *FTC and State of Maine v. Mktg. Architects*, No. 2:18-cv-00050 (D. Me. 2018).

mechanisms” for the consumer to stop recurring charges without guidance about what is simple.

## **VI. Past Rulemaking and Enforcement Efforts**

The Commission initiated its last regulatory review of the Negative Option Rule in 2009,<sup>26</sup> following a 2007 FTC workshop and subsequent Staff Report.<sup>27</sup> The Commission completed the review in 2014.<sup>28</sup> At the time, the Commission found the comments supporting the Rule’s expansion “argue convincingly that unfair, deceptive, and otherwise problematic negative option marketing practices continue to cause substantial consumer injury, despite determined enforcement efforts by the Commission and other law enforcement agencies.”<sup>29</sup> It also noted practices not covered by the Rule (*e.g.*, trial conversions and continuity plans) accounted for most of its enforcement activity in this area. Nevertheless, the Commission declined to expand or enhance the Rule, concluding that amendments were not warranted at that time because the enforcement tools provided by the TSR and, especially, ROSCA, which had only recently become effective, might prove adequate to address the problems generated by deceptive or unfair negative option marketing. However, the Commission emphasized that, if

---

<sup>26</sup> 74 FR 22720 (May 14, 2009).

<sup>27</sup> See *Negative Options*, *supra* note 7, at 26-29.

<sup>28</sup> 79 FR 44271 (July 31, 2014).

<sup>29</sup> The Commission cited a number of its law enforcement actions challenging negative option marketing practices, including, for example, *FTC v. Process Am., Inc.*, No. 14-0386-PSG-VBKx (C.D. Cal. 2014) (processing of unauthorized charges relating to negative option marketing); *FTC v. Willms*, No 2:11-cv-00828 (W.D. Wash. 2011) (Internet free trials and continuity plans); *FTC v. Moneymaker*, No. 2:11-cv-00461-JCM-RJJ (D. Nev. 2012) (Internet trial offers and continuity programs); *FTC v. Johnson*, No. 2:10-cv-02203-RLH-GWF (D. Nev. 2010), (Internet trial offers); and *FTC v. John Beck Amazing Profits, LLC*, No. 2:09-cv-04719 (C.D. Cal. 2009) (infomercial and telemarketing trial offers and continuity programs).

ROSCA and its other enforcement tools failed to adequately protect consumers, the Commission would consider whether and how to amend the Rule.<sup>30</sup>

Since that review, the problems with negative options have persisted. The Commission and states continue to bring cases regularly that challenge negative option practices, including more than 30 recent FTC cases. These matters involved a range of deceptive or unfair practices, including inadequate disclosures for “free” offers and other products or services, enrollment without consumer consent, and inadequate or overly burdensome cancellation and refund procedures.<sup>31</sup> In addition, the Commission continues to receive thousands of complaints each year related to negative option marketing. These cases and the high volume of ongoing complaints suggests there is prevalent, unabated consumer harm in the marketplace.

## **VII. 2019 Advance Notice of Proposed Rulemaking**

Given these continued concerns, the Commission published its 2019 ANPR seeking comments on the current Rule, as well as possible regulatory measures to reduce consumer harm created by deceptive or unfair negative option marketing.<sup>32</sup> Specifically,

---

<sup>30</sup> 79 FR at 44275-76.

<sup>31</sup> Examples of these matters include: *FTC v. Triangle Media Corp.*, 3:18-cv-01388-LAB-LL (S.D. Cal. 2019); *FTC v. Credit Bureau Ctr., LLC*, No. 17-cv-00194 (N.D. Ill. 2018); *FTC v. JDI Dating, Ltd.*, No. 1:14-cv-08400 (N.D. Ill. 2018); *FTC, Illinois, and Ohio v. One Techs., LP*, No. 3:14-cv-05066 (N.D. Cal. 2014); *FTC v. Health Formulas, LLC*, No. 2:14-cv-01649-RFB-GWF (D. Nev. 2016); *FTC v. Nutraclick LLC*, No. 2:16-cv-06819-DMG (C.D. Cal. 2016); *FTC v. XXL Impressions*, No. 1:17-cv-00067-NT (D. Me. 2018); *FTC v. AAFFE Products Corp.*, No. 3:17-cv-00575 (S.D. Cal. 2017); *FTC v. Pact Inc.*, No. 2:17-cv-1429 (W.D. Wash. 2017); *FTC v. Tarr*, No. 3:17-cv-02024-LAB-KSC (S.D. Cal. 2017); *FTC v. AdoreMe, Inc.*, No. 1:17-cv-09083 (S.D.N.Y. 2017); *FTC v. DOTAuthority.com, Inc.*, No. 0:16-cv-62186-WJZ (S.D. Fla. 2018); *FTC v. Bunzai Media Group, Inc.*, No. CV15-04527-GW(PLAX) (C.D. Cal. 2018); and *FTC v. RevMountain, LLC*, No. 2:17-cv-02000-APG-GWF (D. Nev. 2018).

<sup>32</sup> 84 FR 52393 (Oct. 2, 2019).

the Commission sought comment on various alternatives, including amendments to existing rules to further address disclosures, consumer consent, and cancellation. The Commission also requested input on whether and how it should use its authority under Section 18 of the FTC Act to expand the Negative Option Rule to address prevalent, unfair, or deceptive practices involving negative option marketing.<sup>33</sup> In response, the Commission received 17 comments, which we discuss in Section IX.<sup>34</sup>

### **VIII. 2021 Enforcement Policy Statement**

On November 4, 2021, the Commission published an “Enforcement Policy Statement Regarding Negative Option Marketing” to provide guidance regarding its

---

<sup>33</sup> Section 18 of the FTC Act authorizes the Commission to promulgate rules that define with specificity acts or practices in or affecting commerce which are unfair or deceptive. 15 U.S.C. 57a(a)(1)(B). The Commission may issue regulations “where it has reason to believe that the unfair or deceptive acts or practices which are the subject of the proposed rulemaking are prevalent.” 15 U.S.C. 57a(b)(3). The Commission may make such a prevalence finding if it has issued cease and desist orders regarding such acts or practices, or any other available information indicates a widespread pattern of unfair or deceptive acts or practices. Rules under Section 18 “may include requirements prescribed for the purpose of preventing such acts or practices.”

<sup>34</sup> The comments, which are at [www.regulations.gov](http://www.regulations.gov), include: Association of National Advertisers (ANA) (#0082-0008); Performance-Driven Marketing Institute (PDMI) (#0082-0018); Retail Energy Supply Association (RESA) (#0082-0016); The Association of Magazine Media (MPA) (#0082-0019); National Consumers League (NCL) (#0082-0013); ACT - The App Association (#0082-0017); Association for Postal Commerce (“PostCom”) (#0082-0009); Retail Industry Leaders Association (RILA) (#0082-0005); Ralph Oakley (#0082-0004); Chris Hoofnagle (#0082-0002); Pennsylvania Office of Attorney General (on behalf of The Attorneys General of the States of Colorado, Delaware, District of Columbia, Illinois, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nevada, New Jersey, New Mexico, New York, North Dakota, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, Washington, and Wisconsin) (“State AGs”) (#0082-0012); Service Contract Industry Council (SCIC) (#0082-0007); Truth in Advertising (TINA) (#0082-0014); Rep. Mark Takano (#0082-0003); Digital Media Association (DiMA) (#0082-0015); The Entertainment Software Association and Internet Association (ESA) (#0082-0011); News Media Alliance (“the Alliance”) (#0082-0006).

enforcement of various statutes and FTC regulations.<sup>35</sup> The Statement enunciates various principles rooted in FTC case law and previous guidance related to the provision of information to consumers, consent, and cancellations. Among these principles, the Statement emphasized ROSCA's requirement that sellers disclose all material terms related to the underlying product or service that are necessary to prevent deception, regardless of whether that term relates directly to the terms of the negative option offer.<sup>36</sup> In addition, consistent with ROSCA, judicial decisions applying Section 5, and cases brought by the Commission, the seller should obtain the consumer's acceptance of the negative option feature offer separately from any other portion of the entire transaction. Finally, regarding cancellation, the Statement explained negative option sellers should provide cancellation mechanisms at least as easy to use as the method the consumer used to initiate the negative option feature.

## **IX. Comments Received in Response to the ANPR**

Commenters generally supported the current FTC Negative Option Rule. However, as detailed below, they split on whether the Commission should amend the Rule to include new requirements. Some argued existing provisions are adequate, and any additional regulations could harm businesses and consumers by creating unnecessary, overly prescriptive directives that discourage innovation. Others contended that the Commission should expand or consolidate existing requirements into a single rule

---

<sup>35</sup> 86 FR 60822.

<sup>36</sup> The Commission recently alleged a negative option seller's failure to disclose it was impeding access to its movie subscription service violates ROSCA. *In the Matter of MoviePass, Inc.* No. C-4751 (Oct. 5, 2021).

applicable to all types of negative option marketing in all types of media in order to adequately protect consumers.

#### **A. General Views on Negative Option Marketing**

*Benefits:* Several commenters emphasized the benefits of negative option marketing to both consumers and businesses and warned new regulations may limit consumer options.<sup>37</sup> They discussed the ease and simplicity such plans offer consumers by allowing them to avoid time-consuming and inefficient transactions. The Service Contract Industry Council (SCIC) and the News Media Alliance explained such arrangements greatly reduce “the disruption to a consumer’s daily life” by allowing them to maintain their service without going through the enrollment process “month after month, or year after year.” They also help customers avoid problems such as breaks in service when they forgot to renew.

The Entertainment Software Association (ESA), which represents video and computer game companies, added subscriptions allow “consumers to replenish commodity items (such as personal care products), enjoy new items or personalized items at designated intervals (such as clothing and food), and obtain access to products or services at discounts or with members-only benefits (such as entertainment and content services).” The Association of Magazine Media (MPA), an association of magazine publishers, noted that current automatic renewal subscriptions feature high transparency, offer ease of use, facilitate long-term customer relationships, provide a “frictionless customer service experience,” save costs, and allow consumers to receive continuous

---

<sup>37</sup> SCIC, ESA, MPA, and RESA.

delivery for as long as they wish. According to MPA, free trials also allow consumers to sample magazine titles before committing to a subscription purchase.

Additionally, commenters detailed the benefits such renewals provide businesses. MPA stated they help companies avoid the substantial costs of processing invoices and checks each month. For publishers, automatic renewals reduce costs by eliminating multiple notices, forestalling fraudulent mailings, and preventing costly interruptions in service. Retail Energy Supply Association (RESA) also noted automatic renewal plans are critical in the competitive energy supply industry because they promote competition in states with restructured energy markets.

***Negative Aspects:*** However, not all commenters saw inherent benefit in the growing negative option market. Commenter Hoofnagle, a law professor, cautioned the shift to subscription services has caused businesses to become “laser-focused” on enrollment and retention at the expense of the underlying product or consumer value.<sup>38</sup> In his view, the new focus on subscriptions “corrupts innovation” because it motivates companies to “invest in psychological tricks to maintain continuous charging” instead of creating the “best, most compelling products.” According to Hoofnagle, large, dominant platforms devote resources to developing manipulative subscription systems (*i.e.*, “dark patterns”) that induce consumers to sign up for products and services they would not otherwise pay for. Hoofnagle asserted that, ultimately, subscription maintenance becomes the firm’s “terminal goal.”

---

<sup>38</sup> NCL also asserted “[t]here is abundant evidence that consumers are harmed by negative option clauses.”

## B. Information on Current Practices and Deception in the Market

Various commenters submitted information about the scope, volume, and types of negative option marketing, indicating negative options involving free trials, continuity, and auto-renewal programs are pervasive and growing in number. Additionally, many commenters asserted deceptive negative option practices continue to be prevalent, with some describing particular issues with free trials. Finally, commenters discussed ongoing state enforcement efforts related to these problems.

***Expansion of Negative Option Marketing:*** Several commenters indicated negative option marketing continues to grow dramatically. For instance, according to a 2018 McKinsey & Company study, the subscription e-commerce market increased more than 100% over a five-year period prior to the study's publication.<sup>39</sup> The largest retailers in that market generated \$2.6 billion in sales in 2016. A consumer survey prepared for the same study showed nearly half of the respondents had enrolled in at least one negative option subscription, while 35% enrolled in three or more.<sup>40</sup> PDMI also noted the study demonstrates consumers' familiarity with these programs and their embrace of "the benefits such plans provide including convenience, lower cost and the ability to try something for free before purchasing." PDMI suggested the number of such programs has likely increased since the study's completion. It also observed that negative option sales via mobile devices have increased in recent years, including the display of "shoppable ads" on most social media platforms. However, it cautioned against

<sup>39</sup> See ESA.

<sup>40</sup> See Tony Chen, et al., *Thinking inside the subscription box: New research on e-commerce consumers* (Feb. 9, 2018), <https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/thinking-inside-the-subscription-box-new-research-on-e-commerce-consumers>.

projecting the results. Given rapid changes in technology and advertising models in the digital space media, PDMI emphasized the difficulty of predicting “how consumers may choose to purchase goods and services even just a few years from now.” Finally, PDMI explained most negative options appear online, offering a wide array of products and services from major brands including “media services, meal preparation kits, shaving and beauty products, beer and wine, contacts and ordinary household consumables.”

***Prevalence of Deceptive Practices Generally:*** In addition to the sheer volume of negative option marketing, commenters identified evidence of ongoing, widespread deceptive practices. No commenter argued otherwise. TINA, for example, explained negative options are one of its top complaint categories. These complaints usually involve consumers who unwittingly enroll in programs and then find it difficult or impossible to cancel. In addition, NCL cited a 2017 national telephone survey commissioned by CreditCards.com finding 35% of U.S. consumers have enrolled in at least one automatically renewing contract without realizing it. Referring to another survey conducted in 2016, TINA noted that unwanted fees associated with trial offers and automatically renewing subscriptions ranked as “the biggest financial complaint of consumers.”<sup>41</sup>

The State AGs also detailed specific deceptive or unfair practices they see regularly, including the “lack of informed consumer consent, lack of clear and conspicuous disclosures, failure to honor cancellation requests and/or refusal to provide refunds to consumers who unknowingly enrolled in plans.” They further explained the

---

<sup>41</sup> See Rebecca Lake, *Report: Hidden Fees Are #1 Consumer Complaint*, mybanktracker.com (updated Oct. 16, 2018), <https://www.mybanktracker.com/money-tips/money/hidden-fees-consumercomplaint-253387>.

nature of the underlying products often fails to alert consumers of their enrollment in a negative option program. For instance, many offers involve credit monitoring or anti-virus computer programs costing less than \$20 a month and have no tangible presence for consumers. The State AGs explained that consumers are often unaware of having ordered these products, never use them, and never notice them on their bills. The State AGs further explained these transactions often pull consumers into a stream of recurring payments by obtaining credit card information to ostensibly pay for a small shipping charge. As a result, many “consumers have been billed for such services for years before discovering the unauthorized charges.”

Commenters also noted the ongoing enforcement efforts and litigation in recent years involving negative option marketing. In addition to FTC cases, TINA stated that more than 100 federal class actions involving various negative option terms and conditions have been filed since 2014. Notwithstanding these actions, according to TINA, “the incidence of deceptive negative option offers continues to rise.” Citing the increase in consumer complaints and consumer harm in recent years, Representative Takano stated, “deceptive online marketing and unclear recurring payment plans are leaving too many consumers on the hook for products they may not want or even know they purchased.”<sup>42</sup>

In addition to inadequate disclosures and consent procedures, commenters stated some businesses continue to thwart consumers’ efforts to cancel recurring payments. NCL cited the 2017 CreditCards.com survey finding nearly half of all respondents (42%)

---

<sup>42</sup> Congressman Mark Takano represents California’s 41st District in the United States House of Representatives.

complained about “the level of difficulty companies have created for the contract/service cancellation process.”<sup>43</sup> Further, consistent with the Commission’s enforcement history, the State AGs explained many harmful unfair or deceptive practices involve the failure to provide “consumers with a simple cancellation method.” NCL added some companies hide behind complex procedures “to prevent cancellation while others surprise consumers with price increases or contract renewals.” The State AGs stated the sellers often deny consumers refunds and force them “to pay to return the unordered goods.” Finally, Hoofnagle concluded businesses make cancellation difficult in order to raise consumer transaction costs and deter them from ending the contract. “To put this in another perspective,” he wrote, “companies would never put such transaction costs in the way of a purchase option.” Noting numerous complaints from consumers stymied in their efforts “through long telephone hold times and otherwise,” the State AGs also explained that current practices often require consumers to cancel using a different method than the one used to sign up for the program. Further, they often force consumers to listen to multiple upsells before allowing cancellation.

***Specific Problems with Free Trials:*** Several commenters noted particular problems with free trials or trial conversions. According to the State AGs, advertisements for free-to-pay conversion offers often lure consumers by promising a “free” benefit while failing to clearly and conspicuously disclose future payment obligations. These offers sometimes include information to distract consumers from reading the actual purchase terms. The State AGs report these deceptive practices are “rampant online and

---

<sup>43</sup> Brady Porche, *Poll: Recurring charges are easy to start, hard to get out of*, Creditcards.com (Aug. 22, 2017), <https://www.creditcards.com/credit-card-news/autopay-poll.php>.

throughout social media.” These agencies further state, “trial conversions are rife with the potential for abuse and deception,” as companies induce consumers with offers that imply no obligation.

Despite current requirements such as ROSCA, the State AGs observed sellers still often fail to clearly and conspicuously disclose recurring payment obligations incurred by consumers who sign up for these trials. In addition, to gain access to consumer accounts, sellers often charge a small shipping fee for the “free trial” and obtain credit card information in the process. Consumers confronting these sellers often face fees to return the unordered goods and have difficulty obtaining refunds and cancelling their subscriptions.

Additionally, as commenters correctly noted, FTC complaint data indicates substantial problems with free trial marketing. According to NCL and TINA, a Better Business Bureau study of FTC data titled “Subscription Traps and Deceptive Free Trials Scam Millions with Misleading Ads and Fake Celebrity Endorsements” demonstrated complaints about free trials doubled between 2015 and 2017, with complaints during the period reaching nearly 37,000 and losses totaling more than \$15 million. The BBB study, which the State AGs also cited, shows losses in FTC “free trial offer” cases exceeded \$1.3 billion (over the ten years covered by the study). NCL stated that, according to the BBB, the average consumer loss for a free trial is \$186.<sup>44</sup>

---

<sup>44</sup> Steve Baker, *Subscription traps and deceptive free trials scam millions with misleading ads and fake celebrity endorsements*, Better Business Bureau (Dec. 2018), <https://www.bbb.org/globalassets/local-bbbs/council-113/media/bbb-study-free-trial-offers-and-subscription-traps.pdf>.

Other studies reveal similar trends. TINA noted the FBI’s Internet Crime Complaint Center recorded a rise in complaints about free trial offers, growing from 1,738 in 2015 to 2,486 in 2017, with losses totaling more than \$15 million. Similarly, a 2019 Bankrate.com survey cited by NCL found that 59% of consumers have signed up for “free trials” that automatically converted into a recurring payment obligation “against their will.” In NCL’s view, these data point to “a troubling, and costly problem for American consumers.”

***Ongoing Law Enforcement Efforts:*** The State AGs detailed dozens of enforcement actions taken in recent years to address the proliferation of deceptive negative option claims. According to these agencies, their actions “demonstrate that problems persist in this area and that additional regulatory action is needed.” For example, over the last decade, New York alone has reached 23 negative option settlements involving a variety of products and services such as membership programs, credit monitoring, dietary supplements, and apparel. These cases have garnered over \$10 million in consumer restitution and \$14 million in penalties, costs, and fees. The State AGs also described several of the larger settlements reached through multistate investigations, as well as from individual states, involving negative option offers for products and services such as satellite radio, social networking services, language learning programs, security monitoring, and dietary supplements. They also recounted representative stories of consumers who ordered what they thought were free, no-obligation samples but found themselves enrolled in costly programs. The Commission’s recent cases in this area address many, if not all, of the same concerns.

### **C. Opposition to New Requirements**

No commenter opposed the existing Rule, which applies only to prenotification plans. ANA, for example, noted it provides consumers with transparency regarding material terms of marketed advance consent plans and choices regarding which products or services they want to receive. The Rule also provides “businesses flexibility to engage in marketing that benefits consumers.” In addition, ANA stated it enables consumers to purchase goods and services over time and gain exposure to “new, exciting, and useful products and services to which they likely would not have been exposed in the absence of advanced consent arrangements.”

Industry members generally opposed any new regulatory provisions for negative option marketing, arguing existing laws are adequate.<sup>45</sup> According to these commenters, current requirements provide adequate consumer protections, and enforcement agencies possess ample tools to address deceptive practices. The current framework furnishes, in MPA’s words, “a sweeping landscape of federal and state laws that govern such programs, including ROSCA, the TSR, EFTA, and the [Unordered Merchandise Statute].” SCIC added that new credit card rules from MasterCard and Visa contain compliance requirements for auto renewal programs and thus augment the existing regulatory framework. As ESA explained, existing laws “are thorough and allow businesses the flexibility to craft messages and operational procedures” based on their customers, the message’s medium, available technologies for consent, and cost-effective cancellation methods. In ANA’s view, since “violations of the various standards are heavily enforced,” additional requirements would fail to “prevent bad and dishonest actors from behaving unfairly or deceptively in the marketplace.” Finally, some

---

<sup>45</sup> See ANA, RESA, MPA, PostCom, RI, SCIC, DiMA, ESA, and the Alliance.

commenters suggested the number of actions the FTC has brought in recent years demonstrates the agency already has adequate law enforcement tools to combat deceptive negative option marketing.<sup>46</sup>

Industry members also cautioned that new regulations might diminish the benefits provided by negative option offers and hamper innovation.<sup>47</sup> For example, ESA argued current law enforcement requirements adequately address “deceptive or abusive negative option practices” without overly burdensome new regulation. Others, like DIMA and MPA, warned new regulations using a restrictive “one-size-fits-all model” would ultimately harm consumers because, for example, they would restrict marketers’ ability to tailor their offers to consumers’ wishes. MPA also noted an expanded Rule might overburden legitimate businesses to consumers’ detriment while failing to halt specific problems already subject to existing federal statutes, FTC rules, and state laws.<sup>48</sup>

These commenters also cautioned against adding regulations absent sufficient information about problematic practices. Specifically, the Alliance recommended the FTC refrain from imposing new requirements without “clear evidence of a significant problem justifying such measures.” Similarly, ANA asked FTC to identify a “clear

---

<sup>46</sup> See ESA, ANA, MPA.

<sup>47</sup> Two commenters specifically argued any new rule should avoid creating duplicative requirements for their members. First, SCIE, which represents service contract companies, argued state agencies typically regulate their members, and any new FTC rule should avoid any duplicative or potentially conflicting requirements. Similarly, the App Association urged the Commission to consider “excluding software apps and digital platforms” from expanded requirements “until there is an adequate evidence base demonstrating that its extension to the app economy is appropriate, as part of its scaled, flexible approach to implementing ROSCA.”

<sup>48</sup> See also ANA.

record” of perceived harms so that businesses can provide meaningful comments and clearly identify any gaps in the regulations.

#### **D. Concerns About Existing State Requirements**

Many industry commenters also stated a growing number of state laws address many forms of negative option marketing. According to PDMI, for example, there are currently at least 18 state laws, and many more are sure to follow.<sup>49</sup> Notable among these is California’s negative option statute, which addresses disclosures, consent, and accessible and cost-effective cancellation. Virginia has a similar law that provides civil penalties of \$5,000 per violation, as well as a private right of action. ESA complained many of these state laws “have imposed unique and inconsistent requirements” on marketers. PDMI noted, for instance, Florida, Hawaii, and New Mexico laws reference inconsistent renewal periods (six, one, and two months, respectively). Other states have differing requirements for notifications prior to the renewal period (*e.g.*, Florida (30-60 days); New York (15-30 days); North Carolina (15 to 45 days)).<sup>50</sup>

Several industry commenters emphasized these inconsistent state requirements create problems. PDMI, for example, explained they impose “a considerable burden on

---

<sup>49</sup> See, ANA, ESA, PDMI, SCIC, MPA, TINA. Examples of state laws include: California (Cal. Bus. & Prof. Code secs. 17600-17606), Vermont (9 V.S.A. sec. 2454a); District of Columbia (D.C. Code secs. 28A-201 to 28A-204); Florida (Fla. Stat 501.165); Hawaii (Haw. Rev. Stat. sec. 481-9.5); North Carolina (N.C. Gen. Stat. sec. 75-41); and New York (N.Y. Gen. Oblig. Law sec. 5-903(2)).

<sup>50</sup> RESA also asked the Commission to exclude from its rule any activities “already regulated by state public service commissions” such as competitive retail electricity and natural gas suppliers. ACIC explained that many of these state laws exempt contracts that renew for a period of a month or less and instead focus on longer term renewing contracts. Additionally, many states have elected to exempt contracts that consumers may cancel at any time with a pro rata refund required to be provided to the consumer upon cancellation.

companies that utilize negative option marketing, particularly small businesses.” The lack of uniformity requires some companies to create “multiple different order pathways and disclosures” for consumers in different states. For example, many marketers must fashion a single “order experience” and set of disclosures that comply with the most restrictive law. According to PDMI, the continued proliferation of differing state requirements has made an onerous and burdensome compliance process even worse. For example, while California’s automatic renewal law appears most burdensome to many, Vermont’s recent statute is more restrictive in certain aspects (*e.g.*, consent requires consumers to check a box). In addition, the District of Columbia now requires a seller to obtain separate affirmative consent before a free trial converts to a paid subscription. PDMI explained compliance issues could lead to contract voidance and potential exposure in class action litigation.

PDMI argued these various state laws have not helped consumers. Its members’ anecdotal observations suggest little difference in results, such as cancellation rates, between states with differing degrees of restrictive requirements. In its view, these observations may indicate consumers have become generally familiar with negative option programs. At the same time, it contended the more restrictive state laws have imposed significant compliance costs while offering little actual consumer benefit. Thus, PDMI believes consumers and businesses would benefit from a single FTC Rule that preempts state regulation in this area. ESA agreed, explaining that if “FTC regulations in the negative option space could have a preemptive effect,” it would be interested in “exploring a uniform regime that allows for growth and flexibility in the industry, much as the current framework permits.”

In contrast, MPA argued that an expanded FTC Rule would layer on top of the existing “patchwork” and fail to provide a consistent legal framework for industry and consumers. In its view, “publishers should be afforded the flexibility to tailor their subscription offers to their readers within the bounds of existing laws.”

Finally, TINA argued the proliferation of state requirements, as well as MasterCard and Visa’s new rules, reflect “an attempt to fill the gap in federal enforcement.”<sup>51</sup> According to TINA, the resulting collection of state rules and credit card policies leaves consumers with different levels of protection depending on where they live or what credit card they use. Thus, in TINA’s opinion, “the uniform protection” an updated FTC Rule “can offer is much needed.”

#### **E. Need for Additional Consumer Education**

Several commenters suggested the Commission focus on improving existing consumer education efforts.<sup>52</sup> ESA recommended updated industry guidance and additional consumer education in lieu of issuing new regulatory requirements. However, other commenters argued the Commission should not rely on consumer education alone. Hoofnagle, for example, described consumer and business education as “an uneconomical” tool for addressing problems associated with negative options. He explained that such education must compete “with hundreds of” other consumer priorities, from “organic food labeling to energy efficiency ratings,” and creates direct and indirect costs, including consumer time, potential consumer confusion, and even

---

<sup>51</sup> See, e.g., MasterCard, “*Transaction Processing Rules*,” at <https://www.mastercard.us/content/dam/public/mastercardcom/na/global-site/documents/transaction-processing-rules.pdf>.

<sup>52</sup> See DiMA, ESA.

misapprehension. The State AGs, who supported education initiatives, similarly warned, “such efforts will likely reach only a small fraction of the consuming public.” Thus, they recommended the Commission use its authority to issue “clear-cut rules” to help companies avoid deceptive marketing practices that “have caused, and continue to cause, substantial consumer harm.”

#### **F. Limitations of Existing Requirements**

Several commenters discussed the limitations of existing requirements. For example, the State AGs discussed ROSCA’s shortcomings, arguing while the statute has helped combat abuses over the Internet, it “lacks specificity as to how informed consent should be obtained or how clear and conspicuous disclosures should be made.” They also noted ROSCA does not provide “any concrete, bright line requirements that allow enforcement agencies to readily identify violations.” Given existing limitations, the State AGs concluded new regulatory provisions are necessary to establish specific, clear rules to help businesses’ compliance efforts and to allow states to easily identify nonconforming practices. TINA also asserted ROSCA and FTC requirements lack needed specificity regarding cancellation requirements, noting ROSCA only directs marketers to provide “simple mechanisms for a consumer to stop recurring charges.” In contrast, PDMI said the concept of simple cancellation is well understood by sellers in the marketplace.

#### **G. Support for New Regulations**

Several commenters supported additional FTC regulations to address negative option marketing.<sup>53</sup> The State AGs, for example, strongly urged the Commission to

---

<sup>53</sup> NCL, Oakley, TINA, State AGs, PDMI, Takano, and Hoofnagle.

expand the existing Rule or issue new regulations “to combat deceptive and unfair marketing . . . in all forms of negative option marketing, with additional provisions to address issues that arise with respect to trial conversion offers.” Similarly, commenter Oakley recommended “very strong regulations to stop companies from signing people up for unwanted products/services.” PDMI, an industry group, favored amending the Rule to broaden its “scope to apply to all forms of negative option marketing.” In its view, such a rule “would provide greater protection to consumers, would enhance business compliance and would lower overall compliance costs.” PDMI also opined that “consumers and business would benefit from federal preemption of state law regulation in this area.” Representative Takano concluded, “it is time we update the tools and policies designed to ensure companies no longer profiteer through these deceptive practices.” TINA added the Rule needs updates to ensure both consumers and businesses obtain the full benefits of negative options. It further argued the current requirements leave consumers vulnerable and provide incentives for businesses to “silently hope consumers forget about them.” It predicted that, without changes to the Rule, the trend of deceptive trial offers and subscriptions will continue to grow. In TINA’s opinion, updates would “be minimally burdensome to companies” because they would merely require businesses to be “forthcoming and straightforward” with their customers.

**Scope:** Commenters supporting new provisions generally recommended the Commission expand the Rule’s existing regulatory scope to cover all negative option marketing methods in all media, and consolidate requirements.<sup>54</sup> The State AGs identified unfair or deceptive practices, such as those associated with free trials, which

---

<sup>54</sup> See, e.g., State AGs, PDMI, and TINA.

occur in the marketplace but are not covered by the current Negative Option Rule. They also suggested free-to-pay solicitations deserve closer scrutiny than other negative option features due to the longstanding evidence of deceptive tactics, prevalence of consumer complaints about unauthorized charges, and consumer risks associated with these offers.

PDMI agreed a consolidated Negative Option Rule would provide a significant benefit. It explained having requirements in “five different places” imposes burdens on both consumers and businesses and heightens the risk of inadvertent non-compliance. Scattered requirements also create a “trap for the unwary for businesses who do not realize that they must ferret out” applicable mandates across “a wide swath of the federal regulatory landscape.” According to PDMI, consolidation of negative option marketing into a single rule would minimize burdens on marketers, reduce consumer confusion, and enhance compliance. Therefore, PDMI recommended the FTC revise its Rule to include all negative option types and to include ROSCA’s three core provisions regarding notice, consent, and cancellation. In its view, “this would provide a solid foundation for protecting consumers and providing businesses with one uniform set of requirements that can be easily and consistently implemented across all channels and markets.”

***Need for Flexibility:*** Several commenters urged the Commission to employ a flexible approach that accounts for technological changes. They cautioned overly prescriptive rules would jeopardize the consumer benefits of negative options and harm the businesses that provide them.<sup>55</sup> MPA, for example, stated the FTC should not micromanage “lawful business conduct” because such an approach would neither enhance business compliance nor benefit consumers. Several commenters raised concerns

---

<sup>55</sup> See, e.g., App Association, ESA, and ANA.

about overly prescriptive regulatory requirements because a “one size fits all” approach reduces flexibility and hampers innovation. For example, according to ESA, new regulations would likely create standardization that “is unworkable across all industries, media, and technology.” It added an effort to account for all the various iterations of a subscription offer or sales medium would be impractical or unreasonable. Finally, SCIC noted that FTC staff has emphasized the need for marketers to be “free to use their many tools of creativity to figure out the best way to convey that information.”

According to PDMI, rules “need to be sufficiently fluid to permit marketers to adapt their offerings” to current and future media channels. It explained that market changes occur too quickly for any Commission rule to stay apace. Therefore, PDMI strongly urged the Commission to follow its historical “performance” standard approach and “avoid dictating precisely how disclosure must be made, consent must be obtained, or cancellation methods must be implemented.” For instance, it recommended leaving terms such as “clear and conspicuous” and “express informed” consent undefined to “preserve flexibility in the face of rapidly changing technology” and ensure meeting the FTC’s goals without rigid restrictions.

***Important Information:*** Beyond the need for flexibility, the commenters provided specific disclosure recommendations. NCL, for example, suggested the Rule require businesses “to clearly and conspicuously disclose their renewal terms prior to the entry of payment information.” It also recommended the Commission incorporate the “clear and conspicuous” definition from both California’s and the District of Columbia’s automatic renewal statutes. In NCL’s view, these disclosures should specifically include cancellation instructions and deadlines, renewal dates, contract length, amendment

notifications, renewal costs, contract changes at renewal, and business contact information. Hoofnagle asserted sellers also should provide a total cost disclosure so consumers understand what they will be paying each year, as opposed to monthly.

NCL also argued the Rule should require marketers to send notifications electronically, and, for contracts of six months or more, by postal mail, with links, phone numbers, and prepaid postcards appropriate to the medium. The State AGs urged the Commission to require important disclosures (*e.g.*, billing information and requests for acceptance) on a separate page free of “any other information that may serve as a distraction.”

**Consent:** Commenters offered a variety of suggestions regarding possible consent requirements. The State AGs recommended requiring “consumers to take a separate, affirmative action” to consent to negative option features, such as “clicking an ‘I Agree’ button to accept the trial product” accompanied by disclosures about the “terms of the offer, including the amount and frequency of payments.” The State AGs and TINA recommended requirements directing businesses to obtain consent after the trial period expires. TINA noted the District of Columbia now requires companies offering free trials of a month or more to notify consumers between one and seven days before the expiration of the free trial and obtain affirmative consent to the renewal prior to charging consumers.

As described above, the App Association suggested the Commission provide flexibility in any new regulations, but particularly those involving consent. It advocated for a “flexible and outcome-driven regulatory environment” that would allow small businesses to create “the best way for their company to implement this specific

requirement” and “encourage new innovative approaches in consumer transparency.”

Given the likelihood of future technological changes (*e.g.*, faster devices that consumers will want to use quickly), the App Association suggested any new FTC provisions include “flexible yet stable requirements that protect the consumer’s right to choose but at the same time do not stifle innovation.”

**Cancellation:** Several commenters provided specific recommendations for new cancellation rules, including, for example, that the FTC require businesses to provide a cancellation mechanism that mirrors the customer’s method of enrollment.<sup>56</sup> TINA explained consumers should be able to cancel their negative options in “an easy and specific manner” using procedures that are “at least as easy as the subscription process.” In its view, at a minimum, if a consumer subscribed online, they should be able to cancel online. The lack of such specific requirements leaves consumers vulnerable to a company’s interpretation of what “simple” might mean under ROSCA. It also urged the Commission to consider Visa’s new rules requiring businesses to provide an “easy way to cancel the subscription” online, similar to unsubscribing from an email distribution list. TINA additionally noted California’s new rule mandating an easy-to-use cancellation mechanism online, such as a termination email. The State AGs similarly recommended the FTC require “that consumers be allowed to cancel their memberships by the same method as their enrollment (as well as by other methods, at the business’s option).” The App Association, however, urged flexibility in any new cancellation requirements and cautioned against “overly-prescriptive approaches.” Instead, it recommended FTC allow

---

<sup>56</sup> Takona and TINA.

“marketers to decide how to implement their own notification system to stop reoccurring charges,” and to efficiently scale approaches based on consumer expectations and needs.

Hoofnagle, who discussed the negative impacts of abusive cancellation procedures, suggested the Commission prohibit certain specific “transaction costs” imposed on some consumers. Such practices include requiring users to repeatedly request cancelling, to sign in with additional security (e.g., requiring a CAPTCHA completion), to accept third-party scripting, and to re-enter information such as a credit card number. Hoofnagle agreed with other commenters that “cancellation should never be more transactionally burdensome than enrollment” and there should be “symmetry between purchase and cancel.” He also recommended the FTC consider a “one-time ‘no’ rule” to require marketers to accept a consumer’s first “cancel” request and end the transaction without trying to convince the consumer to change their minds or pitching further offers.

***Material Changes:*** Commenters also recommended requirements to address material changes to contract conditions after the consumer enrolls, including changes to price, service, goods, and other material terms. According to TINA, for example, the FTC should require businesses to notify consumers of such changes and provide them an opportunity to cancel before the terms take effect. TINA stated current FTC requirements, as well as ROSCA, do not address “instances in which the terms may change.” Several states, including Virginia, California, and Oregon, require businesses to provide consumers with a clear and conspicuous notice of the material change as well as

information about how to cancel “in a manner that is capable of being retained by the consumer.”<sup>57</sup>

**Reminders:** Commenters also recommended requiring businesses to provide additional reminders as part of their negative option offerings.”<sup>58</sup> For example, TINA supported imposing a notice requirement prior to subscription expiration containing cancellation instructions similar to VISA’s new rules. Those rules require an electronic reminder, sent to consumers a week before the trial period expires, with a link to an online cancellation page. TINA also argued for regular, ongoing notice of the agreement terms along with cancellation instructions. In its view, “such a requirement is important to protect consumers from paying for products or services they do not want or need.” According to Representative Takano, such reminders “will help decrypt the complex nature of negative option agreements” and ensure businesses cannot continue to charge consumers who intended to make only a single purchase.

The State AGs agreed, explaining periodic disclosures ensure consumers are aware of recurring charges and “help prevent the continuation of unknowing or unwanted enrollment in these plans.” They recommended notifications at regular intervals for month-to-month plans, with appropriately worded subject lines (*e.g.*, “Important Billing Information”), coupled with a convenient cancellation method. For services that renew annually, the State AGs contended that, before charging for renewal, companies should notify consumers within a specified period about the timing, amount, and billing method

---

<sup>57</sup> TINA also noted that a bill introduced into the House in 2019, the Unsubscribe Act (H.R. 2683), contains similar requirements. *See also* Takano, NCL, and Hoofnagle. For free trials, NCL argued the Rule should require marketers to obtain express consent before increasing the price of service for an established customer.

<sup>58</sup> TINA, Takano, and State AGs.

along with convenient cancellation procedures. Finally, both the State AGs and Hoofnagle suggested the FTC consider whether periods of consumer inactivity (*e.g.*, 24 months) for a subscribed service should trigger notifications.

***Miscellaneous Recommendations:*** The commenters provided several other recommendations for new requirements, including provisions involving refunds, consumer contact information, deletion of consumer data, and amendments to the TSR. First, the State AGs proposed requiring businesses to provide full refunds to consumers “unwittingly enrolled in a negative option plan.” Second, they suggested the Rule require businesses to obtain a consumer’s email address at the initial consent and send a confirmatory email describing the service or product, the amount and timing of any payments, the payment collection method, and a toll-free cancellation number. For offers involving goods, the State AGs stated businesses should include an invoice in every shipment containing the seller’s name and address, the negative option program terms, return instructions, and a toll-free phone number or email address for cancellation. Third, Hoofnagle asserted a rule should require consumer data deletion after “a reasonable amount of time” to provide customers with a “true exit” from the transaction. Fourth, the State AGs urged the Commission to amend and expand the TSR’s negative option provisions to require sellers to record entire customer transactions and retain such recordings for a specified period. In addition, they recommended the TSR require marketers to provide full refunds in response to complaints unless the company can provide a phone call recording “establishing the consumer’s affirmative consent.”

***Banning Certain Enrollment Methods:*** The State AGs suggested the Commission limit, or prohibit, certain types of negative option marketing that are, in their

opinion, “inherently unreliable.” First, they suggested a ban on “free-to-pay conversion programs” (*e.g.*, free trial magazine subscriptions) to consumers at retail checkout in brick-and-mortar stores. According to the State AGs, cashiers fail to disclose the material terms and conditions of these offers, including the fact that consumers will receive a monthly bill after the trial ends. Retailers use the consumer’s signature authorizing the entire purchase (*e.g.*, groceries, etc.) as consent for the negative option program, and then rely on “inconspicuous” terms on the sale receipt as evidence of consent. The State AGs identified this practice as an “inherently unreliable means of obtaining consumers’ informed consent and should be prohibited.”

Second, the State AGs urged the Commission to ban the use of consumers’ check endorsements to obtain consent to be periodically billed for goods or services. They asserted this practice has led to widespread fraud. Specifically, some businesses send consumers checks for small dollar amounts that appear to come from a familiar company. Small print disclosures near the endorsement line on the reverse of the check indicate that, by cashing the check, consumers are enrolling in a recurring payment program. According to the State AGs, this practice, which has generated many complaints, “is inherently unreliable and should be prohibited” because consumers do not scrutinize the small print on the back of these checks and thus have no reason to expect their signature is consent for a recurring payment program.

Finally, the State AGs argued, without further explanation, the FTC Rule should either ban or place restrictions on “upsell offers that the consumer must respond to before being able to cancel.”

## **X. Prevalence of Deceptive or Unfair Practices Involving Negative Option Marketing and the Need for the Proposed Amendments**

Consistent with the Commission’s past conclusions, the recent comments confirm that deceptive practices involving negative option marketing remain prevalent and that additional requirements are needed to protect consumers. In 2014, the Commission found “that unfair, deceptive, and otherwise problematic negative option marketing practices continue[d] to cause substantial consumer injury, despite determined enforcement efforts by the Commission and other law enforcement agencies.”<sup>59</sup> The evidence since indicates matters have not improved, and, in fact, may be worse. As detailed in Section IX, the commenters provided substantial evidence—in the form of complaint data, studies, survey results, and law enforcement actions—demonstrating deceptive negative option marketing practices remain prevalent. The FTC, the states, and consumer organizations continue to receive thousands of complaints from consumers who unwittingly enrolled in programs and then find it difficult or impossible to cancel. Additionally, studies cited by commenters confirm a pattern of consumer ensnarement in unwanted recurring payments. Commenters also highlighted the many recent federal and state enforcement actions related to negative options, as well as nearly 100 class action cases filed in the last six years.

The Commission and the states continue to regularly bring cases challenging negative option practices. These matters involve a range of deceptive or unfair practices, including inadequate information regarding free trials and other products or programs, enrollment without consumer consent, and inadequate or overly burdensome cancellation

---

<sup>59</sup> 79 FR 44271, 44275 (July 31, 2014).

and refund procedures.<sup>60</sup> The existence of these cases and complaints demonstrates that some commenters' contention that all the problems are being addressed is simply not true. In fact, given the considerable limitations of FTC and state enforcement resources, these law enforcement actions likely represent only the tip of the iceberg—a conclusion corroborated by the complaint and survey evidence in the record.

In the ANPR, the Commission explained it receives thousands of complaints a year related to negative option marketing. In addition, State AGs and other commenters detailed ongoing problems with inadequate disclosures, the failure to obtain consent, poor or nonexistent cancellation procedures, and the refusal to honor cancellation requests and refund demands. They further explained deceptive free trial offers are “rampant online and throughout social media,” and often lure consumers into recurring payments without clearly and conspicuously disclosing future payment obligations.<sup>61</sup> The evidence offered by commenters also demonstrates many sellers do not provide consumers with simple cancellation methods and, instead, create obstacles, such as long telephone hold times or

---

<sup>60</sup> Examples of these matters include: *FTC v. Triangle Media Corp.*, No. 3:18-cv-01388-LAB-LL (S.D. Cal. 2019); *FTC v. Credit Bureau Ctr., LLC*, No. 17-cv-00194 (N.D. Ill. 2018); *FTC v. JDI Dating, Ltd.*, No. 1:14-cv-08400 (N.D. Ill. 2018); *FTC v. One Techs., LP*, No. 3:14-cv-05066 (N.D. Cal. 2014); *FTC v. Health Formulas, LLC*, No. 2:14-cv-01649-RFB-GWF (D. Nev. 2016); *FTC v. Nutraclick LLC*, No. 2:16-cv-06819-DMG (C.D. Cal. 2016); *FTC v. XXL Impressions*, No. 1:17-cv-00067-NT (D. Me. 2018); *FTC v. AAFFE Products Corp.*, No. 3:17-cv-00575 (S.D. Cal. 2017); *FTC v. Pact Inc.*, No. 2:17-cv-1429 (W.D. Wash. 2017); *FTC v. Tarr*, No. 3:17-cv-02024-LAB-KSC (S.D. Cal. 2017); *FTC v. AdoreMe, Inc.*, No. 1:17-cv-09083 (S.D.N.Y. 2017); *FTC v. DOTAuthority.com, Inc.*, No. 0:16-cv-62186-WJZ (S.D. Fla. 2018); *FTC v. Bunzai Media Group, Inc.*, No. CV15-04527-GW(PLAx) (C.D. Cal. 2018); and *FTC v. RevMountain, LLC*, No. 2:17-cv-02000-APG-GWF (D. Nev. 2018).

<sup>61</sup> State AGs.

multiple upsells, to impede consumers from terminating their contracts. These practices are further reflected in the Commission's recent cases.<sup>62</sup>

## **XI. Proposed Amendments – Objectives and Content**

To address these ongoing problems, the Commission proposes to amend the current Negative Option Rule with the objective of setting clear, enforceable performance-based requirements for all negative option features in all media. The proposed amendments are designed to ensure consumers understand what they are purchasing and allow them to cancel their participation without undue burden or complication. As discussed below, the proposed Rule (retitled “Rule Concerning Recurring Subscriptions and Other Negative Option Plans”) addresses the most important issues related to negative option marketing, including misrepresentations, disclosures, consent, and cancellation. These proposed changes, which replace existing provisions in the Rule, enhance and clarify existing requirements currently dispersed in other rules and statutes. They also consolidate all requirements, such as those in the TSR, specifically applicable to negative option marketing. Further, the proposed Rule would allow the Commission to seek civil penalties and consumer redress in contexts where such remedies are currently unavailable, such as deceptive or unfair practices involving negative options in traditional print materials and face-to-face transactions (*i.e.*, in media not covered by ROSCA or the TSR) and misrepresentations (which are not expressly covered by ROSCA, even when on the Internet).

---

<sup>62</sup> See, e.g., *FTC v. Triangle Media Corp.*, No. 3:18-cv-01388-LAB-LL (S.D. Cal. 2019); *FTC v. AdoreMe, Inc.*, No. 1:17-cv-09083 (S.D.N.Y. 2017); and *FTC v. One Techs., LP*, No. 3:14-cv-05066 (N.D. Cal. 2014).

In developing this proposal, and consistent with concerns raised in the comments, the Commission sought to enhance consumer protections while avoiding detailed, prescriptive requirements that would impede innovation. By generally proposing flexible standards, the Commission seeks to establish rules that will not impede advances or become irrelevant as the market changes, while protecting consumers from widespread deceptive or unfair practices.

**Coverage:** The Commission proposes eliminating the current Rule’s prescriptive requirements applicable to prenotification plans and replacing them with the flexible, but enforceable, standards detailed below. The proposed requirements would apply to all forms of negative option marketing, including prenotification and continuity plans, automatic renewals, and free trial offers.<sup>63</sup> This expanded coverage would establish a common set of requirements applicable to all types of negative option marketing.

The proposed Rule defines “negative option feature” to mean a contract provision under which the consumer’s silence or failure to take affirmative action to reject a good or service or to cancel the agreement is interpreted by the negative option seller as acceptance or continuing acceptance of the offer. This definition is consistent with the TSR and ROSCA (which references the TSR’s definition of negative option). The

---

<sup>63</sup> The proposed Rule would apply to “negative option sellers,” which are defined in the proposal as persons selling, offering, promoting, charging for, or otherwise marketing a negative option feature. With certain exceptions, the FTC Act provides the agency with jurisdiction over nearly every economic sector. Certain entities or activities are wholly or partially exempt from FTC jurisdiction under the FTC Act, including most depository institutions, non-profits, transportation and communications common carriage, and the business of insurance. For instance, under Sections 4 and 5 of the FTC Act, the Commission’s jurisdiction does not apply to non-profit organizations generally, but it does extend to non-profits that provide economic benefits to their for-profit members, e.g., trade and professional associations. See *California Dental Ass’n v. FTC*, 526 U.S. 756 (1999).

proposed term includes, but is not limited to, automatic renewals, continuity plans, free-to-pay conversion or fee-to-pay conversions, and pre-notification negative option plans.<sup>64</sup> Additionally, the proposed Rule covers offers made in all media, including Internet, telephone, in-person, and printed material. The Commission's experience, confirmed by many commenters, demonstrates that negative option features pose the same risks across media and sales methods. The amendments would establish a comprehensive scheme for regulation of negative option marketing in a single rule, thus consolidating existing negative option-specific provisions in one location. This change will facilitate compliance by providing one-stop regulatory shopping, as noted by the State AGs and PDMI.

***Misrepresentations:*** Section 425.3 of the proposed Rule prohibits any person from misrepresenting, expressly or by implication, any material fact regarding the *entire* agreement – not just facts related to a negative option feature. FTC enforcement experience demonstrates misrepresentations in negative option marketing cases continue to be prevalent and often involve deceptive representations not only related to the negative option feature but to the underlying product (or service) or other aspects of the transaction as well. Such deceptive practices may involve misrepresentations related to costs, product efficacy, free trial claims, processing or shipping fees, billing information use, deadlines, consumer authorization, refunds, cancellation, or any other material representation.<sup>65</sup>

---

<sup>64</sup> Section II of this Notice contains descriptions of these various plans.

<sup>65</sup> See e.g., *FTC v. Tarr*, No. 3:17-cv-02024-LAB-KSC (S.D. Cal. 2017); *FTC v. First American Payment Systems*, Case 4:22-cv-00654 (E.D. Tex. 2022); *FTC v. XXL Impressions*, No. 1:17-cv-00067-NT (D. Me. 2018); *US v. MyLife.com, Inc.*, No. 2:20-

This provision falls within the Commission's Section 5 authority and its separate authority under ROSCA. The proposed provision provides the FTC with the ability to seek civil penalties and consumer redress for material misrepresentations in media other than telemarketing or the Internet. The record demonstrates this type of provision is necessary. Specifically, despite the Commission's current authority to obtain redress and injunctions under ROSCA and injunctive relief under Section 5 of the FTC Act, the Commission's many enforcement actions over the past several years have failed to stem the tide of deceptive negative option practices online and in person. Ensuring great relief against those who deceive consumers will benefit both consumers and honest sellers who must compete with those who engage in deception.

***Important Information:*** Section 425.4 of the proposed Rule requires sellers to provide the following important information prior to obtaining the consumer's billing information: 1) that consumers' payments will be recurring, if applicable, 2) the deadline by which consumers must act to stop charges, 3) the amount or ranges of costs consumers may incur, 4) the date the charge will be submitted for payment, and 5) information about the mechanism consumers may use to cancel the recurring payments.

The failure to provide this information is a deceptive or unfair practice. As detailed in the comments (*e.g.*, TINA and State AGs), many sellers fail to provide

---

CV-6692-JFW-PDx (C.D. Cal. 2021); *FTC and State of Maine v. Health Research Labs., LLC*, No. 2:17-cv-00467-JDL (D. Me. 2018); *FTC and State of Connecticut v. Leanspa, LLC*, No. 3:11-cv-01715-JCH (D. Conn. 2013); *FTC v. WealthPress, Inc. et al.*, No. 3:23-cv-00046 (M. D. Fla. 2023); *FTC v. BunZai Media Group, Inc.*, No. CV15-04527-GW(PLAx) (C.D. Cal. 2018); *FTC v. Willms*, No 2:11-cv-00828 (W.D. Wash. 2011); *FTC v. Universal Premium Services*, No. CV06-0849 (C.D. Cal. 2006); *FTC v. Remote Response*, No. 06-20168 (S.D. Fla. 2006); and *FTC v. Jeremy Johnson, et al.*, No. 2:10-cv-02203 (D. Nev. 2016).

adequate disclosures, thereby luring consumers into purchasing goods or services they do not want. Moreover, the proposal is consistent with ROSCA, which requires sellers to clearly and conspicuously disclose “all material terms of the transaction before obtaining the consumer’s billing information.” Specifically, the proposed Rule, like ROSCA, would require sellers to disclose any material conditions related to the underlying product or service that is necessary to prevent deception, regardless of whether that term directly relates to the terms of the negative option offer.<sup>66</sup> Complementing ROSCA, the proposal also specifies the types of information sellers must provide so that they have more certainty and consumers receive the information they need to understand the terms of their enrollment. This provision is consistent with Commission orders in this area, requiring no more than any advertisement would need to be non-deceptive.

The proposal does not mandate a long list of prescriptive disclosures, such as renewal dates or business contact information, as some commenters suggested. There is an inherent tradeoff between providing consumers with additional information and ensuring they see and understand the information they need (*i.e.*, consumers may miss important information if the important points are surrounded by useful but less critical information).

Further, to help ensure consumers actually see and understand this important information, the proposed Rule contains general requirements for the location and form of the necessary information in written, telephone, and in-person offers. The FTC’s law enforcement experience and consumer complaints are replete with examples of hidden disclosures, including those in fine print, buried in paragraphs of legalese and sales

---

<sup>66</sup> See *In re: MoviePass, Inc.*, No. C–4751 (Oct. 5, 2021).

pitches, and accessible only through hyperlinks.<sup>67</sup> Making the rules of the road clear prevents deception by businesses trying to take advantage of the gray areas in current statutes and regulations; the possibility of civil penalties deters those who are engaging in fraudulent practices. Moreover, these clearer guidelines should level the playing field for legitimate businesses, freeing them from having to compete against those employing deception.

Specifically, consistent with the Commission’s Policy Statement, the proposed amendments require marketers to present this information “clearly and conspicuously,” a term defined in the proposed amendments. Under the proposal, this information should be difficult to miss (*i.e.*, easily noticeable) or unavoidable and easily understandable by ordinary consumers. In addition, all required information, regardless of media, should not contain any other information that interferes with, detracts from, contradicts, or otherwise undermines the ability of consumers to read, hear, see, or otherwise understand the required information, including any information not directly related to the material terms and conditions of any negative option feature. The proposed amendments also contain requirements related to visual, audible, and written disclosures consistent with the principles enunciated in the Policy Statement. For example, in any communication that is solely visual or solely audible, the disclosure should be made through the same means through which the communication is presented. Additionally, written disclosures should appear immediately adjacent to the means of recording the consumer’s consent for the negative option feature. Again, the Commission’s law enforcement experience as well as

---

<sup>67</sup> See, e.g., *FTC v. Triangle Media Corp.*, No. 3:18-cv-01388-LAB-LL (S.D. Cal. 2019); *FTC v. Tarr*, No. 3:17-cv-02024-LAB-KSC (S.D. Cal. 2017); *FTC v. One Techns., LP*, No. 3:14-cv-05066 (N.D. Cal. 2014).

the comments demonstrate the need for this direction, which should benefit businesses who are trying to make non-deceptive claims by leveling the playing field.

Finally, the FTC’s comprehensive definition of “clear and conspicuous,” developed through years of enforcement experience, covers all the concepts provided in California and D.C. laws’ “clear and conspicuous” definitions with one exception. That exception, the fact that the D.C. definition requires that disclosures be visually proximate to any request for consumer consent, is incorporated by the proposed Rule in a separate consent section.<sup>68</sup>

**Consent:** Section 425.5 of the proposed Rule also requires negative option sellers to obtain consumers’ express informed consent before charging them. The failure to obtain such consent is a deceptive or unfair practice, and the record demonstrates how pervasive this problem has become.<sup>69</sup> Thus, the proposed consent requirements are necessary given how easily marketers can enroll consumers in negative option programs without actual consent.

Proposed Section 425.5 is consistent with ROSCA’s basic “express informed consent” requirement while providing more guidance on how to comply. This more detailed guidance removes ambiguity for marketers, while leveling the playing field and providing deterrence. Moreover, the provision provides flexibility to allow for innovation and change over time. The proposed Rule achieves these goals by requiring marketers to:

---

<sup>68</sup> Cal. Bus. & Prof. Code § 17601 and D.C. Code § 28A–202.

<sup>69</sup> See, e.g., State AGs comments; *FTC v. Bunzai Media Group, Inc.*, No. CV15-04527-GW(PLAx) (C.D. Cal. 2018); *FTC v. Health Formulas, LLC*, No. 2:14-cv-01649-RFB-GWF (D. Nev. 2016); *FTC v. JDI Dating, Ltd.*, No. 1:14-cv-08400 (N.D. Ill. 2018); *FTC and State of Maine v. Health Research Laboratories, LLC*, No. 2:17-cv-00467-JDL (D. Me. 2018) (Section 5); *FTC v. XXL Impressions*, No. 1:17-cv-00067-NT (D. Me. 2018) (Section 5).

1) obtain the consumer’s unambiguously affirmative consent to the negative option feature separately from any other portion of the offer; 2) refrain from including any information that “interferes with, detracts from, contradicts, or otherwise undermines” the consumer’s ability to provide express informed consent; (3) obtain the consumer’s unambiguously affirmative consent to the entire transaction; and (4) obtain and maintain (for three years or a year after cancellation, whichever is longer) verification of the consumer’s consent.<sup>70</sup>

These requirements address commenters’ (e.g., TINA, Rep. Takano, and State AGs) concerns that many sellers employ inadequate consent procedures to increase enrollment in negative option programs. By providing more specificity regarding the steps sellers must take to ensure they obtain consumer consent, these provisions will also help address the deceptive use of so-called “dark patterns,” sophisticated design practices that manipulate users into making choices they would not otherwise have made.<sup>71</sup> Indeed, consumer agreement to any free-to-pay conversion or negative option feature or any other automatic renewal provision obtained through the use of deceptive or unfair dark patterns does not constitute express informed consent.

The provisions also address the unique challenges presented by negative option offers, even for marketers trying to comply with the law. Specifically, consumers can

---

<sup>70</sup> The Commission seeks comment on whether the proposed Rule should contain a different recordkeeping period.

<sup>71</sup> The FTC recently released a report describing these practices, which include disguising ads to look like independent content, making it difficult for consumers to cancel subscriptions or charges, burying key terms or junk fees, and tricking consumers into sharing their data. See *Bringing Dark Patterns to Light*, FTC Staff Report (Sept. 2022), [https://www.ftc.gov/system/files/ftc\\_gov/pdf/P214800%20Dark%20Patterns%20Report%209.14.2022%20-%20FINAL.pdf](https://www.ftc.gov/system/files/ftc_gov/pdf/P214800%20Dark%20Patterns%20Report%209.14.2022%20-%20FINAL.pdf).

easily focus solely on the aspects of an offer that mirror the offers they regularly encounter (*e.g.*, the quality, functionality, one-time price of the item, and the availability of a free trial offer). Thus, many consumers think they are consenting to these core attributes but miss the other unusual price term—the negative option feature. The proposal addresses these issues by requiring marketers to obtain consent for the negative option feature separately from the rest of the offer and other parts of the transaction, thereby ensuring the consent is informed.<sup>72</sup> For instance, according to the comments, sellers offering negative option features through in-person transactions frequently use consumers’ signatures on the entire purchase as consent for the negative option. Further, in effect, the requirement for a separate negative option consent prohibits certain negative option enrollment methods, such as the use of retail sales receipts or check endorsements, in which the customer’s signature serves a dual purpose (*e.g.*, negative option enrollment and promotional check cashing). As commenters noted, such practices appear to be particularly attractive to those committing fraud. Finally, the Rule requires sellers to obtain consent for the entire transaction to ensure consumers also agree to elements of the agreement not specifically related to the negative option feature.<sup>73</sup>

To maintain consistency with the TSR, the proposed consent provision also contains a cross-reference to 16 CFR Part 310 to inform sellers of that regulation and includes specific mention of TSR requirements for consent in transactions involving

---

<sup>72</sup> See, *e.g.*, *FTC v. Jason Cardiff (Redwood Scientific)*, No. ED 18-cv-02104 SJO (PLAx) (C.D. Cal. 2018); *FTC v. DOTAuthority.com, Inc.*, No. 0:16-cv-62186-WJZ (S.D. Fla. 2018); *FTC v. JDI Dating, Ltd.*, No. 1:14-cv-08400 (N.D. Ill. 2014).

<sup>73</sup> The Commission recently alleged that failure to disclose a material term of the underlying service that was necessary to prevent deception violated this provision of ROSCA. *In re: MoviePass, Inc.*, No. C-4751 (Oct. 5, 2021).

preacquired account information and a free-to-pay conversion.<sup>74</sup> However, beyond the basic steps discussed above and these current TSR requirements, the proposed consent requirements contain no prescriptive provisions requiring sellers to implement specific practices.

Instead, the proposed Rule provides guidance for sellers making written offers (including those on the Internet) to assure they have obtained the consumer's unambiguously affirmative consent. Specifically, for all written offers (including over the Internet), sellers may obtain express informed consent through a check box, signature, or other substantially similar method, which the consumer must affirmatively select or sign to accept the negative option feature, and no other portion of the offer.<sup>75</sup> This approach should protect consumers and marketers alike. Consumers are assured they pay for only the goods and services they choose, and marketers can opt for the certainty of avoiding liability by adhering to the Commission's proposed means of compliance. Alternatively, marketers are free to innovate as long as they meet the express informed consent standard.

---

<sup>74</sup> 16 CFR 310(a)(7).

<sup>75</sup> To avoid potential conflicts with EFTA, this proposed provision does not apply to transactions covered by the preauthorized transfer provisions of that Act, 15 U.S.C. 1693e, and Regulation E, 12 CFR 1005.10. Those EFTA provisions, which apply to a range of preauthorized transfers including some used for negative options, contain various prescriptive requirements (e.g., written consumer signatures that comply with E-Sign, 15 U.S.C. 7001-7006, evidence of consumer identity and assent, the inclusion of terms in the consumer authorization, and the provision of a copy of the authorization to the consumer) beyond the measures identified in the proposed Rule. Consequently, compliance with the proposed Rule would not necessarily ensure compliance with Regulation E. For example, use of a check box for consent without additional measures may not comply with Regulation E's more specific authorization requirements.

In the free trial context, while marketers must obtain consumers' express informed consent prior to being charged, the proposal does not require sellers to obtain an additional (or alternative) round of consent after the trial's completion. Although such additional consent would remind many consumers of their ongoing purchases, the failure to provide this second round of consent does not necessarily constitute an unfair or deceptive practice.<sup>76</sup> For example, if sellers follow the proposed Rule's disclosure and consent requirements, consumers should understand they are enrolled in, and will be charged for, the negative option feature once the free trial ends. Nonetheless, the Commission invites comment on whether additional (or alternative) measures are necessary to prevent unfairness or deception and ensure consumers have adequate notice concerning the initiation of recurring purchases or payments following the completion of a free trial. For example, the Commission seeks comment on whether sellers offering free trials should be required to obtain an additional round of consent before charging a consumer at the completion of the free trial.

***Simple Cancellation Mechanism (“Click to Cancel”):*** Easy cancellation is an essential feature of a fair and non-deceptive negative option program. If consumers cannot easily leave the program when they wish, the negative option feature is little more than a means of charging consumers for goods or services they no longer want. Unfortunately, the record demonstrates easy cancellation is all too often illusory.<sup>77</sup> To address this persistent unfair and deceptive practice, the proposed Rule, consistent with ROSCA and California requirements, directs sellers to provide a simple cancellation

---

<sup>76</sup> 15 U.S.C. 57a(a)(1)(B).

<sup>77</sup> See, e.g., NCL and State AGs.

mechanism to immediately halt any recurring charges.<sup>78</sup> However, while ROSCA’s cancellation provision is laudable, it has failed to eliminate the barriers many marketers have erected to keep consumers from canceling. Specifically, many marketers take advantage of the ambiguity of the term simply to thwart or delay consumers’ attempts to cancel. The Commission’s cases, as well as the State AGs’ and TINA’s comments, demonstrate the need for clearer guardrails in this area. To construct these guardrails, the proposed Rule requires the mechanism to be at least as simple as the one used to initiate the charge or series of charges. Because sellers have huge incentives to create a frictionless purchasing process, ensuring cancellation is equally simple should remove barriers, such as unreasonable hold times or verification requirements. The lack of detailed requirements affords businesses flexibility in meeting the proposed Rule’s simple cancellation standard.

The proposal also requires sellers to provide a simple cancellation mechanism through the same medium used to initiate the agreement, whether, for instance, through the Internet, telephone, mail, or in-person. On the Internet, this “Click to Cancel” provision requires sellers, at a minimum, to provide an accessible cancellation mechanism on the same website or web-based application used for sign-up. If the seller allows users to sign up using a phone, it must provide, at a minimum, a telephone number and ensure all calls to that number are answered during normal business hours. Further, to meet the requirement that the mechanism be at least as simple as the one used to initiate the recurring charge, any telephone call used for cancellation cannot be more expensive

---

<sup>78</sup> The TSR requires disclosure of the material terms of a seller’s cancellation policy (if one exists) and prohibits misrepresentations about cancellation policies. 16 CFR 310.3. However, it does not contain specific cancellation mechanism requirements.

than the call used to enroll (*e.g.*, if the sign-up call is toll free, the cancellation call must also be toll free). For a recurring charge initiated through an in-person transaction, the seller must offer the simple cancellation mechanism through the Internet or by telephone in addition to, where practical, the in-person method used to initiate the transaction.

The proposed Rule provides for this flexible approach in lieu of, as some commenters suggested, prohibitions against a list of specific practices (*e.g.*, additional security requirements, third-party scripting, etc.) that may impair cancellation. Specific prohibitions may be counterproductive, solving today's issues only to inadvertently provide a road map to tomorrow's deception. Unscrupulous sellers, for example, can simply circumvent detailed prohibitions and employ new infinitely clever means to thwart consumers. The proposed performance standard avoids this eventuality. Additionally, such restrictions may prohibit legitimate measures used by sellers for security reasons or other purposes. The proposed provision, therefore, mandates results and provides the flexibility to meet them.

The proposed Rule does not contain a separate provision requiring refunds for consumers "unwittingly enrolled in a negative option plan," as some commenters suggested. Such a provision is not needed to prevent deception because enrolling consumers without their express informed consent would already violate the proposed Rule's consent requirements (proposed Section 425.5).

Finally, the proposed Rule does not adopt a commenter recommendation to augment cancellation provisions by requiring sellers to completely delete consumer data following cancellation to provide consumers with a "true exit." Although such a procedure may be desirable for many consumers, the record does not support an assertion

that the practice of retaining consumer data after cancellation is inherently unfair or deceptive, nor would a requirement related to data deletion prevent other unfair or deceptive practices related to negative options.<sup>79</sup> Instead, this issue involves questions of relief related to broader privacy issues, and thus falls outside the scope of this proceeding.

***Additional Offers Before Cancellation (“Saves”):*** The proposed Rule also contains a provision for sellers who seek to pitch additional offers or modifications (*i.e.*, defined as a “Save” in the proposed Rule) during a consumer’s cancellation attempt. Under the proposal, before making such pitches, the seller must first ask consumers whether they would like to consider such offers or modifications (*e.g.*, “Would you like to consider a different price or plan that could save you money?”). If consumers decline this invitation, the seller must desist from presenting such offers and cancel the negative option arrangement immediately. If they accept, the seller can pitch the alternative offers. To prevent consumers from entering a protracted series of such offers, the proposed Rule also clarifies that a consumer’s consent to receive additional offers or modifications applies only to the cancellation attempt in question and not to subsequent attempts. Thus, consumers could disengage during the “save” attempt (*e.g.*, by hanging up, closing the browser, or disconnecting the chat) and avail themselves of the easy cancellation during a separate, subsequent attempt. As noted in the comments (*e.g.*, NCL and State AGs), evidence demonstrates many businesses have created unnecessary and burdensome obstacles in the cancellation process, including forcing uninterested consumers to listen to multiple upsells before allowing cancellation, that are not outweighed by countervailing benefits to consumers or competition. This is an unfair and deceptive

---

<sup>79</sup> 15 U.S.C. 57a(a)(1)(B).

practice. The proposed provision would effectively prohibit such practices by giving consumers the ability to avoid them, while allowing sellers to pitch new offers to those consumers who find these additional offers desirable. In addition, this provision should not create any significant burden for sellers.

***Reminders and Confirmations:*** For contracts involving the automatic delivery of physical goods (*e.g.*, pet food), the proposed Rule does not, as some commenters recommended, mandate confirmatory emails or periodic reminders. In situations where the seller has otherwise clearly disclosed the terms of the deal, obtained consent, and provided a simple cancellation mechanism, the record does not support an assertion that the absence of these reminders is inherently unfair or deceptive, given the requirement that sellers must provide all material information upfront. Moreover, while the lack of a reminder may result in some consumers paying for goods they do not want based simply on the lack of diligence, any injury is reasonably avoidable by consumers themselves. Specifically, each delivery serves as a reminder of the contract, allowing consumers to reasonably avoid further payments by contacting the company and cancelling the arrangement. Thus, the record does not support an assertion that such an agreement is inherently unfair.

Subscriptions and other negative option arrangements that do not involve physical goods, however, present a different issue. As some commenters explained, because these services may have no regular, tangible presence for consumers (*e.g.*, data security monitoring or subscriptions for online services), many consumers may reasonably forget they enrolled in such plans and, as a result, incur perpetual charges for services they do

not want or use. Thus, the failure to provide reminders for such contracts meet all three elements of unfairness.<sup>80</sup>

Accordingly, the Commission proposes to require sellers to provide an annual reminder to consumers enrolled in negative option plans involving anything other than physical goods. Under the proposal, such reminders must identify the product or service, the frequency and amount of charges, and the means to cancel (see proposed Section 425.7). As a matter of good business practice, many sellers already provide such reminders to consumers enrolled in these programs. However, even for those who do not, the proposal should impose little additional burden (*e.g.*, a short, generic email). The Commission seeks comment on this proposal, including, for example, whether the Commission should narrow the coverage of the proposed language by types of covered services or time duration between reminders.

***Material Changes:*** The proposed Rule does not contain a provision addressing the need for notices when sellers make material changes to a negative option contract. Because these contracts can last years, and even decades, the original agreement often allows the seller to change material terms of the agreement such as price, services, and product quantity. As commenters noted, some states have requirements addressing this issue. However, whether such a practice is unfair or deceptive depends heavily on the facts presented in each case (*e.g.*, consumers may reasonably expect a small annual increase in price for some products or services, but not massive increases or even small

---

<sup>80</sup> *FTC Policy Statement on Unfairness*, appended to *International Harvester Co.*, 104 F.T.C. 949 (1984). “To justify a finding of unfairness the injury must satisfy three tests. It must be substantial; it must not be outweighed by any countervailing benefits to consumers or competition that the practice produces; and it must be an injury that consumers themselves could not reasonably have avoided.” *Id.*

increases for different products). Because consumer interpretation of these claims is so fact dependent, it is not practical to draw a universal line between legal and violative behavior. Thus, the Commission can best address issues in this area on a case-by-case basis through law enforcement actions. Given the importance of this issue, however, the Commission seeks further comment on whether and how the Rule can address this issue consistent with FTC's authority to combat unfair or deceptive practices.

**Penalties:** Under the proposal, the civil penalties for the Rule would continue to reflect the amounts set out in 16 CFR 1.98(d).

**State Requirements:** The Federal Trade Commission Act does not explicitly preempt state law, and the legislative history of the FTC Act indicates that Congress did not intend the FTC to occupy the field of consumer protection regulation.<sup>81</sup> Accordingly, any preemptive effect of a Rule would be limited to instances where it is not possible for a private party to comply with both state and the Commission regulations, or where application of state regulations would frustrate the purposes of the Rule.<sup>82</sup>

Therefore, Section 425.7 of the proposed Rule specifies that the Rule would not supersede, alter, or affect state statutes or regulations relating to negative option marketing, except to the extent that a state statute, regulation, order, or interpretation is inconsistent with the proposed Rule. The proposal also indicates state requirements are not inconsistent with the Rule to the extent they afford greater protection to consumers.

---

<sup>81</sup> See, e.g., *Am. Fin. Servs. Ass'n v. FTC*, 767 F.2d 957, 989 (D.C. Cir. 1985).

<sup>82</sup> Preemption would occur where there is an “actual conflict between the two schemes of regulation [such] that both cannot stand in the same area.” *Fla. Lime & Avocado Growers, Inc., v. Paul*, 373 U.S. 132, 141 (1963). See also *Am. Fin. Servs.*, 767 F.2d 957 (Credit Practices Rule); *Harry and Bryant Co. v. FTC*, 726 F.2d 993 (4th Cir. 1984) (Funeral Rule); *Am. Optometric Assoc. v. FTC*, 626 F.2d 896 (D.C. Cir. 1980) (Ophthalmic Practices Rule).

The Commission invites comment on whether the proposed Rule conflicts with any existing state requirements.

***Consumer Education:*** The Commission plans to continue its efforts to provide information to help consumers with their purchasing decisions and avoid ensnarement in unwanted recurring payment programs. However, consumer education does not provide a substitute for improving existing regulatory provisions. Consumer education is likely to have a limited benefit where sellers lure consumers into an agreement without consumers' knowledge, particularly with the use of dark patterns.

***Exempted Activities:*** The Commission seeks comment on whether the Rule should exempt any entities or activities that are otherwise subject to the Commission's authority under the FTC Act. In the comments, various interests, such as energy sellers and service contract providers, urged the Commission to exempt their industries. They argued existing state licensing and other requirements that already apply to their activities adequately address the problems noted above and further rules would only interfere with the existing regulatory structure. They note that some state laws (*e.g.*, California) contain exemptions for activities such as service contract sellers and administrators, as well as state public utility commission licensees.

Those commenting on this issue should detail which, if any, industries should be exempt, or not exempt, and why, including whether the proposed Rule would impose requirements that conflict with state regulations targeted to a specific industry sector, or are antithetical to the goals of such state laws.

## XII. The Rulemaking Process

As explained in Section XIII of this document, the Commission invites interested parties to submit data, views, and arguments on the proposed amendments to the Negative Option Rule and the issues and questions raised in this document. The comment period will remain open until [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].<sup>83</sup> To the extent practicable, all comments will be available on the public record and posted at the docket for this rulemaking on <https://www.regulations.gov>. The Commission will provide an opportunity for an informal hearing if an interested person requests to present their position orally. *See* 15 U.S.C. 57a(c). Any person interested in making a presentation at an informal hearing must submit a comment requesting to make an oral submission, and the request must identify the person's interests in the proceeding and indicate whether there are any disputed issues of material fact that need to be resolved during the hearing. *See* 16 CFR 1.11(e). The comment should also include a statement explaining why an informal hearing is warranted and a summary of any anticipated testimony. If the Commission schedules an informal hearing, either on its own initiative or in response to a request by an interested party, a separate notice will issue. *See id.* 1.12(a).

The Commission can decide to finalize the proposed rule if the rulemaking record, including the public comments in response to this NPRM, supports such a conclusion. The Commission may, either on its own initiative or in response to a commenter's request, engage in additional processes, which are described in 16 CFR

---

<sup>83</sup> The Commission elects not to provide a separate, second comment period for rebuttal comments. *See* 16 CFR 1.11(e) ("The Commission may in its discretion provide for a separate rebuttal period following the comment period.").

1.12, 1.13. Based on the comment record and existing prohibitions against deceptive or unfair negative option marketing under Section 5 of the FTC Act and other rules and statutes, the Commission does not here identify any disputed issues of material fact that need to be resolved at an informal hearing. The Commission may still do so later, on its own initiative or in response to a persuasive showing from a commenter.

### **XIII. Request for Comments**

The Commission seeks comments on all aspects of the proposed requirements, including the likely effectiveness of the proposed Rule in helping the Commission combat unfair or deceptive practices in negative option marketing. The Commission also seeks comment on various alternatives to the proposed regulation, to further address disclosures, consumer consent, and cancellation. It also seeks comment on other approaches, such as the publication of additional consumer and business education. The Commission seeks any suggestions or alternative methods for improving current requirements. In their replies, commenters should provide any available evidence and data that supports their position, such as empirical data, consumer perception studies, and consumer complaints.

You can file a comment online or on paper. For the Commission to consider your comment, we must receive it on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]. Write “Negative Option Rule; Project No. P064202” on your comment. Your comment—including your name and your state—will be placed on the public record of this proceeding, including, to the extent practicable, on the website <https://www.regulations.gov>.

Because of the agency's heightened security screening, postal mail addressed to the Commission will be subject to delay. We strongly encourage you to submit your comments online through the <https://www.regulations.gov> website. To ensure that the Commission considers your online comment, please follow the instructions on the web-based form.

If you file your comment on paper, write "Negative Option Rule; Project No. P064202" on your comment and on the envelope, and mail your comment to the following address: Federal Trade Commission, Office of the Secretary, 600 Pennsylvania Avenue NW, Suite CC-5610 (Annex N), Washington, DC 20580. If possible, please submit your paper comment to the Commission by overnight service.

Because your comment will be placed on the public record, you are solely responsible for making sure that your comment does not include any sensitive or confidential information. In particular, your comment should not contain sensitive personal information, such as your or anyone else's Social Security number; date of birth; driver's license number or other state identification number or foreign country equivalent; passport number; financial account number; or credit or debit card number. You are also solely responsible for making sure your comment does not include any sensitive health information, such as medical records or other individually identifiable health information. In addition, your comment should not include any "[t]rade secret or any commercial or financial information which . . . is privileged or confidential"—as provided in Section 6(f) of the FTC Act, 15 U.S.C. 46(f), and FTC Rule 4.10(a)(2), 16 CFR 4.10(a)(2)—including, in particular, competitively sensitive information such as

costs, sales statistics, inventories, formulas, patterns, devices, manufacturing processes, or customer names.

Comments containing material for which confidential treatment is requested must be filed in paper form, must be clearly labeled “Confidential,” and must comply with FTC Rule 4.9(c), 16 CFR 4.9(c). In particular, the written request for confidential treatment that accompanies the comment must include the factual and legal basis for the request and must identify the specific portions of the comment to be withheld from the public record. *See* FTC Rule 4.9(c). Your comment will be kept confidential only if the General Counsel grants your request in accordance with the law and the public interest. Once your comment has been posted publicly at <https://www.regulations.gov>—as legally required by FTC Rule 4.9(b), 16 CFR 4.9(b)—we cannot redact or remove your comment, unless you submit a confidentiality request that meets the requirements for such treatment under FTC Rule 4.9(c), and the General Counsel grants that request.

Visit the FTC website to read this document and the news release describing it. The FTC Act and other laws that the Commission administers permit the collection of public comments to consider and use in this proceeding as appropriate. The Commission will consider all timely and responsive public comments it receives on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]. For information on the Commission’s privacy policy, including routine uses permitted by the Privacy Act, see <https://www.ftc.gov/policy-notices/privacy-policy>.

#### **XIV. Preliminary Regulatory Analysis and Regulatory Flexibility Act Requirements**

Under Section 22(a) of the FTC Act, 15 U.S.C. 57b-3(a), the Commission must issue a preliminary regulatory analysis for a proceeding to amend a rule if the Commission: (1) estimates that the amendment will have an annual effect on the national economy of \$100 million or more; (2) estimates that the amendment will cause a substantial change in the cost or price of certain categories of goods or services; or (3) otherwise determines that the amendment will have a significant effect upon covered entities or upon consumers. The Commission has preliminarily determined that the proposed amendments to the Rule will not have such effects on the national economy; on the cost of goods and services offered for sale by mail, telephone, or over the Internet; or on covered parties or consumers. The proposed amendments contain requirements related to consumer disclosures, consumer consent, and cancellation. In developing these proposals, the Commission has sought to minimize prescriptive requirements and provide flexibility to sellers in meeting the Rule's objectives. In addition, most sellers provide some sort of disclosures, follow consent procedures, and offer cancellation mechanisms in the normal course of business. Thus, compliance with the proposed requirements should not create any substantial added burden. The Commission, however, requests comment on the economic effects of the proposed amendments.

The Regulatory Flexibility Act ("RFA"), 5 U.S.C. 601-612, requires that the Commission conduct an Initial Regulatory Flexibility Analysis ("IRFA") with a proposed rule and a Final Regulatory Flexibility Analysis ("FRFA"), if any, with the final rule, unless the Commission certifies that the rule will not have a significant economic impact on a substantial number of small entities. *See* 5 U.S.C. 603-605. The RFA requires an agency to provide an IRFA with the proposed Rule and a FRFA with the final rule, if

any. The Commission is not required to make such analyses if a rule would not have such an economic effect, or if the rule is exempt from notice-and-comment requirements.

The Commission does not have sufficient empirical data at this time regarding the affected industries to determine whether the proposed amendments to the Rule may affect a substantial number of small entities as defined in the RFA. However, a preliminary analysis suggests the proposed amendments to the Rule would not have a significant economic impact on small entities. The proposed amended rule would apply to all businesses using Negative Option Features in the course of selling goods or services. Small entities in potentially any industry could incorporate a negative option feature into a sales transaction. The Commission is unaware, however, of any source of data identifying across every industry the number of small entities that routinely utilize negative option features. Based on the comments received in response to the ANPR, and on the Commission's own experience and expertise, the Commission believes the use of negative option features may be more prevalent in some industries than others, for example, computer security services, online streaming services, and service contract providers. The Commission lacks sufficient data to determine the portion of total estimated affected companies (see estimate in the Paperwork Reduction Act analysis in section XV) that qualify as small businesses across each industry. Therefore, the Commission seeks comments on the percentage of affected companies that qualify as small businesses.

In addition, it is also unclear whether the proposed amendments to the Rule would have a significant economic impact on small entities. However, as noted in Section XV, the impact of the proposed requirements on all firms, whether small businesses or not,

may not be substantial. As discussed in that section, the FTC estimates the majority of firms subject to the proposed recordkeeping requirements already retain these types of records in the normal course of business. The FTC anticipates many transactions subject to the Rule are conducted via the Internet, minimizing burdens associated with compliance. Additionally, most entities subject to the Rule are likely to store data through automated means, which reduces compliance burdens associated with record retention. Furthermore, regarding the proposed disclosure requirements, it is likely the substantial majority of sellers routinely provide these disclosures in the ordinary course as a matter of good business practice. Moreover, many state laws already require the same or similar disclosures as the Rule would mandate. Finally, some negative option sellers are already covered by the Telemarketing Sales Rule and thus subject to its disclosure requirements. The Commission therefore anticipates that the Rule will not have a significant economic impact on small entities. Nevertheless, because the precise costs to small entities of updating their systems and disclosures are difficult to predict, the Commission has decided to publish the following IRFA pursuant to the RFA and to request public comment on the impact on small businesses of the proposed amendments.

#### **A. Description of the Reasons Why Action by the Agency Is Being Considered**

As described in this document, the proposed amendments address unfair or deceptive practices in negative option marketing. The FTC, other federal agencies, and state attorneys general have brought multiple actions to stop and remedy the harms caused by negative option marketing. The record demonstrates, however, that existing authorities fall short because there is no uniform legal framework, which leaves entire

sectors of the economy under-regulated and constrain the relief that the Commission may obtain for law violations. In the ANPR, the Commission explained it receives thousands of complaints a year related to negative option marketing. As discussed above in Sections VI, VII, and IX, the proposed changes, which replace existing provisions in the Rule, enhance and clarify existing requirements currently dispersed in other rules and statutes. They also consolidate all requirements, such as those in the TSR, specifically applicable to negative option marketing. Further, the proposed Rule would allow the Commission to seek civil penalties and consumer redress in contexts where such remedies are currently unavailable, such as deceptive or unfair practices involving negative options in traditional print materials and face-to-face transactions (*i.e.*, in media not covered by ROSCA or the TSR) and misrepresentations (which are not expressly covered by ROSCA, even when on the Internet).

**B. Succinct Statement of the Objectives of, and Legal Basis for, the Proposed Amendments**

The objective of the proposed amendments is to curb deceptive or unfair practices occurring in negative option marketing. The legal basis for the proposed amendments is Section 18(b)(3) of the FTC Act, 15 U.S.C. 57a(b)(3), which provides the Commission with authority to issue a notice of proposed rulemaking where it has reason to believe that the unfair or deceptive acts or practices which are the subject of the proposed rulemaking are prevalent.

**C. Description and Estimate of the Number of Small Entities to Which the Proposed Amendments Will Apply**

The proposed amendments affect sellers, regardless of industry, engaged in making negative option offers, defined by the Rule to mean any person “selling, offering, promoting, charging for, or otherwise marketing goods or services with a Negative Option Feature.” As discussed in the introduction to this section, determining a precise estimate of how many of these are small entities, or describing those entities further, is not readily feasible because the staff is not aware of published, comprehensive revenue and/or employment data for all possible affected entities, which come from a variety of different industries and which may or may not sell goods or services with negative options. The Commission invites comment and information on this issue.

#### **D. Description of the Projected Reporting, Recordkeeping and Other Compliance Requirements**

The proposed rule amendments would require negative option sellers to disclose certain information about negative option features, obtain a consumer’s express informed consent and maintain records of consumer consent for three years after the initial transaction or one year after cancellation (whichever is longer), and provide consumers a simple mechanism for cancellation. The estimates for the proposed recordkeeping and disclosure requirements are set out within the Paperwork Reduction Act analysis in Section XV. As mentioned in the earlier introductory section of the IFRA, the impact of these proposed requirements on small entities is most likely not significant. The small entities potentially covered by these amendments will include all such entities subject to the Rule (*e.g.*, for purposes of the proposed amendment, entities selling goods or services through negative option offerings). The professional skills necessary for compliance with

the proposed amendments would include sales and clerical personnel. The Commission invites comment on these issues.

#### **E. Duplicative, Overlapping, or Conflicting Federal Rules**

As discussed in this document, the proposed amendments contain certain provisions that are similar to or expand on requirements in the TSR as well as ROSCA. The proposed amendments would establish a common set of requirements applicable to all types of negative option marketing. The Commission anticipates these changes will facilitate compliance and reduce potential confusion among sellers and consumers regarding their compliance obligations for sales involving negative option offers. The FTC has not identified any other federal statutes, rules, or policies currently in effect that may duplicate or conflict with the proposed rule. As explained above, the proposed amendments have been specifically drafted to avoid any conflict with EFTA and Regulation E. The proposed amendments are also consistent with the existing requirements of the TSR, *see supra* Section XI, while filling a regulatory gap by extending protections to other, non-telemarketing transactions. The Commission invites comment and information regarding any potentially duplicative, overlapping, or conflicting federal statutes, rules, or policies.

#### **F. Description of Any Significant Alternatives to the Proposed Amendments**

In formulating the proposed amendments, the Commission has made every effort to avoid imposing unduly burdensome requirements on sellers. To that end, the Commission has avoided, where possible, proposing specific, prescriptive requirements that could stifle marketing innovation or otherwise limit seller options in using new

technologies. In addition, the Commission has sought comments as detailed in Section XI of this document on several alternatives, including provisions related to consent requirements (additional consent for free trials) and reminder requirements (narrowing the scope of product types requiring reminders). The former would likely increase burdens on sellers but, at the same time, may benefit consumers by helping to ensure they do not become enrolled in negative option arrangements they do not want. The latter alternative would likely decrease burden but may fail to help consumers cancel programs they are unaware of. The Commission seeks comments on the ways in which the proposed amendments could be modified to reduce costs or burdens for small entities. If the comments filed in response to this document identify small entities that would be affected by the proposed Rule, as well as alternative methods of compliance that would reduce the economic impact of the proposed Rule on such entities, the Commission will consider the feasibility of such alternatives and determine whether they should be incorporated into the final Rule.

## **XV. Paperwork Reduction Act**

The current Rule contains various provisions that constitute information collection requirements as defined by 5 CFR 1320.3(c), the definitional provision within the Office of Management and Budget (“OMB”) regulations implementing the Paperwork Reduction Act (“PRA”). OMB has approved the Rule’s existing information collection requirements through January 31, 2024 (OMB Control No. 3084-0104). The proposed amendments make changes in the Rule’s recordkeeping and disclosure requirements that will increase the PRA burden as detailed below. Accordingly, FTC

staff will submit this notice of proposed rulemaking and associated Supporting Statement to OMB for review under the PRA.<sup>84</sup>

**Estimated Annual Hours Burden: 265,000 hours**

The estimated burden for recordkeeping compliance is 53,000 hours and the estimated burden for the requisite disclosures is 212,000 hours. Thus, the total PRA burden is 265,000 hours. These estimates are explained below.

**Number of Respondents**

FTC staff estimates there are 106,000 entities currently offering negative option features to consumers. This estimate is based primarily on data from the U.S. Census North American Industry Classification System (NAICS) for firms and establishments in industry categories wherein some sellers offer free trials, automatic renewal, prenotification plans, and continuity plans. Based on NAICS information as well as its own research and industry knowledge, FTC staff identified an estimated total of 530,000 firms involved in such industries.<sup>85</sup> However, FTC staff estimates that only a fraction of the total firms in these industry categories offer negative option features to consumers. For example, few grocery stores and clothing retailers, which account for approximately a third of the of the total estimate from all industry categories, are likely to regularly offer

---

<sup>84</sup> The PRA analysis for this rulemaking focuses strictly on the information collection requirements created by and/or otherwise affected by the amendments.

<sup>85</sup> Examples of these industries include sellers of software, streaming media, social media services, financial monitoring, computer security, fitness services, groceries and meal kits, dietary supplements, sporting goods, home service contracts, home security systems, office supplies, pet food, computer supplies, cleaning supplies, home/lawn maintenance services, personal care products, clothing sales, energy providers, newspapers, magazines, and books. The NAICS does not provide estimates for all of these categories. Where such data is unavailable, the staff has used its own estimates based on its knowledge of these industry categories.

negative option features. In addition, some entities included in the total may qualify as common carriers, exempt from the Commission's authority under the FTC Act.

Accordingly, the Commission estimates that approximately 106,000 business entities (20%) offer negative option features to consumers.

### **Recordkeeping Hours**

The proposed Rule would require negative option sellers to retain records sufficient to verify consumer consent related to a negative option feature and consideration of further offers prior to cancellation for at least 3 years, or until one year after the consumer cancels the contract or the contract is otherwise terminated, whichever period is longer. FTC staff estimates the majority of firms subject to the Rule already retain these types of records in the normal course of business. Under such conditions, the time and financial resources needed to comply with disclosure requirements do not constitute "burden" under the PRA.<sup>86</sup> Moreover, staff anticipates that many transactions subject to the Rule are conducted via the Internet and most entities subject to the Rule are likely to store data through automated means, which reduces compliance burdens associated with record retention. Accordingly, staff estimates that 53,000 entities subject

---

<sup>86</sup> Under the PRA, the time, effort, and financial resources necessary to comply with a collection of information that would be incurred by persons in the normal course of their activities (*e.g.*, in compiling and maintaining business records) does not constitute burden from the Rule where the associated recordkeeping is a usual and customary part of business activities. 5 CFR 1320.3(b)(2).

to the Rule will require approximately one hour per year to comply with the Rule’s recordkeeping requirements, for an annual total of 53,000 burden hours.

### **Disclosure Hours**

The proposed Rule would require negative option sellers to provide several disclosures to consumers including the amount to be charged, the deadline the consumer must act to avoid charges, the date charges will be submitted for payment, the cancellation mechanism the consumer can use to end the agreement, reminders for recurring payments involving non-physical goods, and requests related to further offers prior to cancellation.<sup>87</sup> Staff anticipates that the substantial majority of sellers routinely provide these disclosures in the ordinary course as a matter of good business practice. For these sellers, the time and financial resources associated with making these disclosures do not constitute a “burden” under the PRA because they are a usual and customary part of regular business practice. 5 CFR 1320.3(b)(2). Moreover, many state laws require the same or similar disclosures as the Rule mandates. In addition, approximately 2,000 negative option sellers are already covered by the Telemarketing Sales Rule and subject to its disclosure requirements. Accordingly, to reflect these various considerations, FTC estimates the disclosure burden required by the Rule will be, on average, two hours each

---

<sup>87</sup> Because all legitimate sellers offer consumers some sort of cancellation mechanism in the normal course of business, the proposed Rule’s requirement for a simple cancellation mechanism is unlikely to create additional burdens.

year for each seller subject estimated to be subject the Rule, for a total estimated annual burden of 212,000 hours.

**Estimated Annual Labor Cost: \$5,689,550**

As indicated above, staff estimates existing covered entities will require approximately 53,000 hours to comply with the proposed rule's recordkeeping provisions. Applying a clerical wage rate of \$18.75/hour,<sup>88</sup> recordkeeping maintenance for existing telemarketing entities would amount to an annual cost of approximately \$993,750.

The estimated annual labor cost for disclosures for all entities is \$4,695,800. This total is the product of applying an estimated hourly wage rate for sales personnel of \$22.15<sup>89</sup> to the estimate of 212,000 hours for compliance with the Rule's disclosure requirements.

Thus, the estimated annual labor costs are \$5,689,550 [(\$993,750 recordkeeping) + (\$4,695,800 disclosure)].

**Estimated Annual Non-Labor Cost**

The capital and start-up costs associated with the Rule's recordkeeping provisions are *de minimis*. Any disclosure or recordkeeping capital costs involved with the Rule,

---

<sup>88</sup> This figure is derived from the mean hourly wage shown for Information and Record Clerks. See *Occupational Employment and Wages—May 2021*, Bureau of Labor Statistics, U.S. Department of Labor (March 31, 2022), Table 1 (“National employment and wage data from the Occupational Employment Statistics survey by occupation, May 2021”), available at <https://www.bls.gov/news.release/pdf/ocwage.pdf>.

<sup>89</sup> This figure is derived from the mean hourly wage shown for Sales and related occupations. See *Occupational Employment and Wages, supra*.

such as equipment and office supplies, would be costs borne by sellers in the normal course of business.

Pursuant to Section 3506(c)(2)(A) of the PRA, the FTC invites comments on: (1) whether the disclosure, recordkeeping, and reporting requirements are necessary, including whether the resulting information will be practically useful; (2) the accuracy of our burden estimates, including whether the methodology and assumptions used are valid; (3) how to improve the quality, utility, and clarity of the disclosure requirements; and (4) how to minimize the burden of providing the required information to consumers.

## **XVI. Communications by Outside Parties to the Commissioners or Their Advisors**

Pursuant to Commission Rule 1.18(c)(1), the Commission has determined that communications with respect to the merits of this proceeding from any outside party to any Commissioner or Commissioner advisor shall be subject to the following treatment. Written communications and summaries or transcripts of oral communications shall be placed on the rulemaking record if the communication is received before the end of the comment period. They shall be placed on the public record if the communication is received later. Unless the outside party making an oral communication is a member of Congress, such communications are permitted only if advance notice is published in the Weekly Calendar and Notice of “Sunshine” Meetings.<sup>90</sup>

## **XVII. Proposed Rule Language**

### **List of Subjects in 16 CFR Part 425**

---

<sup>90</sup> See 15 U.S.C. 57a(i)(2)(A); 16 CFR 1.18(c).

Advertising, Trade Practices.

For the reasons set out in this document, the Commission proposes to amend part 425 of title 16 of the Code of Federal Regulations as follows:

1. Revise part 425 to read as follows:

**PART 425—RULE CONCERNING RECURRING SUBSCRIPTIONS AND OTHER NEGATIVE OPTION PLANS**

Sec.

425.1 Scope.

425.2 Definitions.

425.3 Misrepresentations.

425.4 Important Information.

425.5 Consent.

425.6 Simple Cancellation (“Click to Cancel”).

425.7 Annual Reminders for Negative Option Features Not Involving Physical Goods.

425.8 Relation to State Laws.

Authority: 15 U.S.C. 41-58.

**425.1 Scope.**

This Rule contains requirements related to any form of negative option plan in any media, including, but not limited to, the Internet, telephone, in-print, and in-person transactions.

**425.2 Definitions.**

- (a) *Billing Information* means any data that enables any person to access a customer's account, such as a credit card, checking, savings, share or similar account, utility bill, mortgage loan account, or debit card.
- (b) *Charge, Charged, or Charging* means any attempt to collect money or other consideration from a consumer, including but not limited to causing Billing Information to be submitted for payment, including against the consumer's credit card, debit card, bank account, telephone bill, or other account.
- (c) *Clear and Conspicuous* means that a required disclosure is easily noticeable (*i.e.* difficult to miss) and easily understandable by ordinary consumers, including in all of the following ways:
  - (1) In any communication that is solely visual or solely audible, the disclosure must be made through the same means through which the communication is presented. In any communication made through both visual and audible means, such as a television advertisement, the disclosure must be presented simultaneously in both the visual and audible portions of the communication even if the representation requiring the disclosure is made in only one means.
  - (2) A visual disclosure, by its size, contrast, location, the length of time it appears, and other characteristics, must stand out from any accompanying text or other visual elements so that it is easily noticed, read, and understood.
  - (3) An audible disclosure, including by telephone or streaming video, must be delivered in a volume, speed, and cadence sufficient for ordinary consumers to easily hear and understand it.

(4) In any communication using an interactive electronic medium, such as the Internet,

phone app, or software, the disclosure must be unavoidable. A disclosure is not Clear and

Conspicuous if a consumer must take any action, such as clicking on a hyperlink or

hovering over an icon, to see it.

(5) The disclosure must use diction and syntax understandable to ordinary consumers and

must appear in each language in which the representation that requires the disclosure

appears.

(6) The disclosure must comply with these requirements in each medium through which

it is received, including all electronic devices and face-to-face communications.

(7) The disclosure must not be contradicted or mitigated by, or inconsistent with,

anything else in the communication.

(8) When the representation or sales practice targets a specific audience, such as children,

the elderly, or the terminally ill, “ordinary consumers” includes members of that group.

(d) *Negative Option Feature* is a provision of a contract under which the consumer’s

silence or failure to take affirmative action to reject a good or service or to cancel the

agreement is interpreted by the negative option seller as acceptance or continuing

acceptance of the offer, including, but not limited to:

(1) an automatic renewal;

(2) a continuity plan;

(3) a free-to-pay conversion or fee-to-pay conversion; or

(4) a pre-notification negative option plan.

(e) *Negative Option Seller* means the person selling, offering, promoting, charging for, or

otherwise marketing goods or services with a Negative Option Feature.

(f) *Save* means an attempt by a seller to present any additional offers, modifications to the existing agreement, reasons to retain the existing offer, or similar information when a consumer attempts to cancel a Negative Option Feature.

**425.3 Misrepresentations.**

In connection with promoting or offering for sale any good or service with a Negative Option Feature, it is a violation of this Rule and an unfair or deceptive act or practice in violation of Section 5 of the Federal Trade Commission Act (“FTC Act”) for any Negative Option Seller to misrepresent, expressly or by implication, any material fact related to the transaction, such as the Negative Option Feature, or any material fact related to the underlying good or service.

**425.4 Important Information.**

(a) *Disclosures.* In connection with promoting or offering for sale any good or service with a Negative Option Feature, it is a violation of this Rule and an unfair or deceptive act or practice in violation of Section 5 of the FTC Act for a Negative Option Seller to fail to disclose to a consumer, prior to obtaining the consumer’s Billing Information, any material term related to the underlying good or service that is necessary to prevent deception, regardless of whether that term directly relates to the Negative Option Feature, and including but not limited to:

(1) That consumers will be Charged for the good or service, or that those Charges will increase after any applicable trial period ends, and, if applicable, that the Charges will be on a recurring basis, unless the consumer timely takes steps to prevent or stop such Charges;

- (2) The deadline (by date or frequency) by which the consumer must act in order to stop all Charges;
- (3) The amount (or range of costs) the consumer will be Charged and, if applicable, the frequency of such Charges a consumer will incur unless the consumer takes timely steps to prevent or stop those Charges;
- (4) The date (or dates) each Charge will be submitted for payment; and
- (5) The information necessary for the consumer to cancel the Negative Option Feature.

*(b) Form and Content of Required Information.*

- (1) Clear and Conspicuous: Each disclosure required by paragraph (a) of this section must be Clear and Conspicuous.
- (2) Placement:
  - (i) If directly related to the Negative Option Feature, the disclosures must appear immediately adjacent to the means of recording the consumer's consent for the Negative Option Feature; or
  - (ii) If not directly related to the Negative Option Feature, the disclosures must appear before consumers make a decision to buy (*e.g.*, before they "add to shopping cart").
- (3) Other Information: All communications, regardless of media, must not contain any other information that interferes with, detracts from, contradicts, or otherwise undermines the ability of consumers to read, hear, see, or otherwise understand the disclosures, including any information not directly related to the material terms and conditions of any Negative Option Feature.

**425.5 Consent.**

(a) *Express Informed Consent.* In connection with promoting or offering for sale any good or service with a Negative Option Feature, it is a violation of this Rule and an unfair or deceptive act or practice in violation of Section 5 of the FTC Act for a Negative Option Seller to fail to obtain the consumer's express informed consent before Charging the consumer. In obtaining such expressed informed consent, the Negative Option Seller must:

- (1) Obtain the consumer's unambiguously affirmative consent to the Negative Option Feature offer separately from any other portion of the transaction;
- (2) Not include any information that interferes with, detracts from, contradicts, or otherwise undermines the ability of consumers to provide their express informed consent to the Negative Option Feature;
- (3) Obtain the consumer's unambiguously affirmative consent to the rest of the transaction; and
- (4) Keep or maintain verification of the consumer's consent for at least three years, or one year after the contract is otherwise terminated, whichever period is longer.

(b) *Requirements for Negative Option Features Covered in the Telemarketing Sales Rule.* Negative Option Sellers covered by the Telemarketing Sales Rule must comply with all applicable requirements provided in part 310 of this title, including, for transactions involving preacquired account information and a free-pay-conversion, obtaining from the customer, at a minimum, the last four (4) digits of the account number to be charged and making and maintaining an audio recording of the entire telemarketing transaction as required by part 310. (c) *Documentation of Unambiguously Affirmative Consent for Written Offers.* Except for transactions covered by the preauthorized transfer provisions

of the Electronic Fund Transfer Act (15 U.S.C. 1693e) and Regulation E (12 CFR 1005.10), a Negative Option Seller will be deemed in compliance with the requirements of paragraph (a)(3) of this section for all written offers (including over the Internet or phone applications), if that seller obtains the required consent through a check box, signature, or other substantially similar method, which the consumer must affirmatively select or sign to accept the Negative Option Feature and no other portion of the transaction. The consent request must be presented in a manner and format that is clear, unambiguous, non-deceptive, and free of any information not directly related to the consumer's acceptance of the Negative Option Feature.

**425.6 Simple Cancellation (“Click to Cancel”).**

(a) *Simple Mechanism Required for Cancellation.* In connection with promoting or offering for sale any good or service with a Negative Option Feature, it is a violation of this Rule and an unfair or deceptive act or practice in violation of Section 5 of the FTC Act for the Negative Option Seller to fail to provide a simple mechanism for a consumer to cancel the Negative Option Feature and avoid being Charged for the good or service and immediately stop any recurring Charges.

(b) *Simple Mechanism at Least as Simple as Initiation.* The simple mechanism required by paragraph (a) of this section must be at least as easy to use as the method the consumer used to initiate the Negative Option Feature.

(c) *Minimum Requirements for Simple Mechanism.* At a minimum, the Negative Option Seller must provide the simple mechanism required by paragraph (a) of this section through the same medium (such as Internet, telephone, mail, or in-person) the consumer used to consent to the Negative Option Feature, and:

- (1) For Internet cancellation, in addition to the requirements of paragraphs (a) and (b) of this section, the Negative Option Seller must provide, at a minimum, the simple mechanism over the same website or web-based application the consumer used to purchase the Negative Option Feature.
- (2) For telephone cancellation, in addition to the requirements of paragraphs (a) and (b) of this section, the Negative Option Seller must, at a minimum, provide a telephone number, and assure that all calls to this number are answered promptly during normal business hours and are not more costly than the telephone call the consumer used to consent to the Negative Option Feature.
- (3) For in-person sales, in addition to the requirements of paragraphs (a) and (b) of this section, the Negative Option Seller must offer the simple mechanism through the Internet or by telephone in addition to, where practical, an in-person method similar to that the consumer used to consent to the Negative Option Feature. If the simple mechanism is offered through the telephone, all calls must be answered during normal business hours and, if applicable, must not be more costly than the telephone call the consumer used to consent to the Negative Option Feature.

(d) *Saves:* The seller must immediately cancel the Negative Option Feature upon request from a consumer, unless the seller obtains the consumer's unambiguously affirmative consent to receive a Save prior to cancellation. Such consent must apply only to the cancellation attempt in question and not to subsequent attempts. The Negative Option Seller must keep or maintain verification of the consumer's consent to receiving a Save prior to cancellation for at least three years, or one year after the contract is otherwise terminated, whichever period is longer.

**§ 425.7 Annual Reminders for Negative Option Features Not Involving Physical Goods.**

In connection with sales with a Negative Option Feature that do not involve the automatic delivery of physical goods, it is a violation of this Rule and an unfair act or practice in violation of Section 5 of the FTC Act for a Negative Option Seller to fail to provide consumers reminders, at least annually, identifying the product or service, the frequency and amount of charges, and the means to cancel. At a minimum, such reminders must be provided through the same medium (such as Internet, telephone, or mail) the consumer used to consent to the Negative Option Feature. For in-person sales, the Negative Option Seller must provide the reminder through the Internet or by telephone in addition to, where practical, an in-person method similar to that the consumer used to consent to the Negative Option Feature.

**§ 425.8 Relation to State Laws.**

(a) *In General.* This part shall not be construed as superseding, altering, or affecting any other State statute, regulation, order, or interpretation relating to negative option requirements, except to the extent that such statute, regulation, order, or interpretation is inconsistent with the provisions of this part, and then only to the extent of the inconsistency.

(b) *Greater Protection under State Law.* For purposes of this section, a State statute, regulation, order, or interpretation is not inconsistent with the provisions of this part if the protection such statute, regulation, order, or interpretation affords any consumer is greater than the protection provided under this part.

By direction of the Commission, Commissioner Wilson dissenting.

**April J. Tabor,**

*Secretary.*

## **Expert Report of Dr. Jennifer King**

**FTC vs. Match Group, Inc. and Match Group, LLC.**

**Jan. 13, 2023**

## Table of Contents

<b>1. Summary of Conclusions</b>	<b>3</b>
<b>2. Qualification Statement</b>	<b>6</b>
<b>3. Overview of Method</b>	<b>9</b>
A. Introduction to Human-Computer Interaction	9
B. Heuristic Analysis Methods	11
C. “Dark” Design Patterns	15
<b>4. Heuristic Analysis of Match.com’s Cancellation Flow</b>	<b>21</b>
A. Overview of Match.com Cancellation Process	22
I. 2016 Cancellation Process	24
II. 2019 Cancellation Process	31
III. 2022 Cancellation Process	34
B. Analysis of Cancellation Process	35
I. Violation of Usability Heuristics	36
a. Visibility of System Status	36
b. Consistency and Standards	37
c. Aesthetic and Minimalist Design	38
II. Dark Patterns in the Cancellation Process	40
a. Obstruction	41
b. Forced Action	42
c. Hidden Information	44
d. Content Strategy	45
1. Inconsistent Language	46
2. Confusing Terminology	50
III. The Password Authentication Screen	52
a. Password Friction: Balancing Users’ Security and Ease of Access	52
<b>5. Conclusion: Putting the Heuristic Analysis into Perspective</b>	<b>57</b>
A. Evidence from Company Documents	59
B. Competitor Practices	62
C. Conclusion	65
<b>Appendix I: Dr. King’s CV</b>	<b>66</b>
<b>Appendix II: List of all cases Dr. King was deposed or testified at trial</b>	<b>74</b>

## 1. Summary of Conclusions

Match is an online dating service established in 1995 with as many as 21.5 million members. The company describes its mission as helping “singles find the kind of relationship they’re looking for.”<sup>1</sup> Match.com allows members to post photos, written expressions, and relationship preferences to their profile and operates an “anonymous” email network by which members’ profile remains private until they confirm a match. The company advertises several subscription packages, including a six month subscription which, prior to mid-2019, featured a “Match Guarantee.” Despite these offers, multiple customers have filed complaints about their difficulty and/or inability to cancel their subscriptions. The FTC’s complaint calls Match.com’s cancellation process “convoluted and confusing;” this is corroborated by statements from Match.com’s head of customer service: “it’s been the same complaint for the past decade that I’ve been with Match . . . It takes up to 7 or 8 clicks to complete the flow to turn off [subscriptions] if you can even figure out how to do it.”<sup>2, 3</sup>

The FTC asked me to evaluate Match.com’s cancellation flow based on the following inquiries:

- 1. Was Match.com’s cancellation process easy to use?**
- 2. Was Match.com’s cancellation process easy to find?**

I examined the cancellation flow for 2016, 2019, and 2022, documenting changes to password screens, buttons, links, and copywriting. Based on this evidence, I conclude the following:

---

<sup>1</sup> <https://www.match.com/help/aboutus.aspx?lid=4>

<sup>2</sup> 116 - First Amended Complaint.pdf, 20.

<sup>3</sup> MATCH320168\_image.pdf

**Q1: Was Match.com's cancellation process easy to use?**

No. Match.com's cancellation procedure was not easy or simple to use.

- The lack of breadcrumb navigation (2022), labeling of steps, and visibility of system status makes it hard for users to know where they are in the cancellation process.
- Inconsistent design and labeling at various steps in the process was confusing.
- The inclusion of extraneous steps, including password authentication and survey questions, introduced unnecessary friction and made the cancellation process longer than necessary and more difficult.

**Q2: Was Match.com's cancellation process easy to find?**

No. Match.com's cancellation process was not easy for users to locate.

- The discoverability of the cancellation process is buried under indirect settings and language (e.g. “Manage Subscription,” “Manage Account”).
- Similarly, Match.com's help site buries information about subscription cancellation in their help pages under a “See all articles” link. Upon clicking it, the “Canceling” page appears at the bottom of the help site.
- There is one primary pathway to cancellation; I could locate only one secondary pathway, with the link buried in the help page described above.

In investigating the ease of use and findability of Match.com's cancellation process, I found several forms of dark design patterns including: obstruction (“Roach Motel”), forced action, hidden information, and ‘confirmshaming’ language. These patterns are harmful in that they block users from leaving an online service, compel users into undesired actions, withhold information, and pressure users through word choice and images. Moreover, I identified several points within

the cancellation flow that could cause user abandonment, including the password authentication screen and survey steps. The survey, which was not indicated as optional or skippable, was spread over two disconnected pages and featured multiple questions including a Likert scale and open text field. Existing best practices indicate that an appropriate stage to survey users would be in a post-cancellation email or post-cancellation page.

Additionally, I determined that the password screen was arbitrarily placed in the cancellation flow compared to other Account Settings that did not require password authentication. Ultimately, the cancellation flow could have been reduced to four page-steps versus Match.com's eight page-step process.

## 2. Qualification Statement

I am presently a research fellow at Stanford University, where I focus on topics related to information privacy and artificial intelligence. I obtained my Ph.D. in Information Management and Systems (Information Science) from the University of California, Berkeley School of Information in 2018, with an emphasis in Human-Computer Interaction (HCI), information law and policy, and social computing. Prior to starting my current role in January 2021, I was the Director of Consumer Privacy at the Center for Internet and Society at Stanford Law School. I am an internationally recognized expert on data privacy issues, and I am often a speaker at a wide range of academic, civil society, regulatory, and industry-sponsored conferences and events. Prior to obtaining my Ph.D. and working in the research field, I received a Master of Information Management and Systems (MIMS) degree in 2006, also from the U.C. Berkeley School of

Information. I also worked for nearly a decade in the Internet software industry, as both a product manager and web producer, where my work encompassed a range of companies and specialties.

A key area of my expertise focuses on how graphical user interfaces are designed in ways that promulgate deception, confusion, coercion, or manipulation of people encountering this content, either through deliberate intent on the part of designers, or through poor design choices. This area of study, commonly called “dark patterns,” has exploded in the last five or more years as the presence of dark patterns has become widespread across the commercial internet.<sup>4</sup> This work has been explored by UX practitioners, academic and HCI researchers including Harry Brignull, Arunesh Mathur, Colin M. Gray, whose work is cited throughout this report. Once the province of smaller companies engaged in deceptive, illicit schemes, they have been widely adopted by a range of companies with legitimate business models that nonetheless use dark patterns to impose time-pressured purchase decisions, push consumers to disclose excessive amounts of personal information that they might otherwise prefer not to disclose, or make it difficult for consumers to perform actions such as unsubscribing from paid services.

---

<sup>4</sup> See generally: Jamie Luguri, Lior Jacob Strahilevitz, Shining a Light on Dark Patterns, *Journal of Legal Analysis*, Volume 13, Issue 1, 2021, Pages 43–109, <https://doi.org/10.1093/jla/laaa006>; Arunesh Mathur, Gunes Acar, Michael J. Friedman, Elena Lucherini, Jonathan Mayer, Marshini Chetty, and Arvind Narayanan. 2019; *Dark Patterns at Scale: Findings from a Crawl of 11K Shopping Websites*. Proc. ACM Hum.-Comput. Interact. 3, CSCW, Article 81; Arunesh Mathur, Jonathan Mayer & Mihir Kshirsagar, *What Makes a Dark Pattern... Dark?: Design Attributes, Normative Considerations, and Measurement Methods*, Proc. 2021 CHI Conf. on Hum. Factors Computing Sys. (2021); Colin M. Gray, Yubo Kou, Bryan Battles, Joseph Hoggatt & Austin L. Toombs, *The Dark (Patterns) Side of UX Design*, 2018 Proc. 2018 CHI Conf. on Hum. Factors Computing Sys., 9–10; Caroline Sinders and Sebastian Rieger, Policy Brief: Dark Patterns - Regulating Digital Design, Stiftung Neue Verantwortung (May 13, 2020), <https://www.stiftung-nv.de/en/publication/dark-patterns-regulating-digital-design/>; Jennifer King and Adriana Stephan. Regulating Dark Patterns in Practice – Applying the California Privacy Rights Act. Georgetown Technology and Law Review. 5 Geo. L. Tech. Rev. 251 (2021).

My interest in dark patterns as a research area began with my study of privacy policies and other forms of online disclosures, where I investigated consumer comprehension of policies and disclosures in online and mobile environments, and related issues regarding their design, framing, placement, and content. Based on my research experience, I have consulted as an expert witness on numerous cases related to dark patterns and deceptive design choices since 2009. I have given multiple public presentations on the topic of dark patterns (including participating in a FTC public workshop on the topic), consulted with the California Attorney General's office regarding the use of dark patterns in connection with its landmark privacy law, the California Consumer Privacy Act, and published a law review article on issues related to regulating dark patterns (included in my CV). As of December 2021, along with colleagues at Stanford University's Digital Civil Society Lab, I co-direct the Dark Patterns Tip Line, located at: <https://darkpatternstipline.org/>. This website is an online resource that continues to expand using submissions of dark patterns from the public.

Attached to this report as Appendix I is my current Curriculum Vitae (CV) with a list of all of my publications, and a list of all of the cases in which I have testified as an expert at trial or by deposition in the past decade under "Litigation Consulting" under Appendix II.

### 3. Overview of Method

The method I used to evaluate this matter and form my expert conclusions and opinions are based primarily upon my academic and professional training in Human-Computer Interaction (HCI), original research, and review of related work by other academics and professionals. In this section, I will provide an overview of HCI, the methods I used to render my conclusions and opinions, and specific details about the topic of “dark patterns” and why dark patterns are relevant to this case.

To form my conclusions and opinions in this matter, I conducted my research process as follows:

1. Reviewed amended complaint filed by the FTC.
2. Reviewed screen captures and screenshots of the cancellation flow, public-facing Frequently Asked Questions (FAQ) and other screen captures from Match.com, performed a heuristic analysis, and formed conclusions regarding questions of consumer confusion.
3. Reviewed internal company documents discussing the cancellation flow.

I employed two researchers to assist me with my research and analysis in this matter. I am being compensated at a rate of \$450/hr. My compensation in this matter is not contingent on my findings.

#### A. Introduction to Human-Computer Interaction

Human-Computer Interaction, or HCI, is the study of how humans engage with computer interfaces. HCI is rooted in the field of human factors and ergonomics, which studies how humans interact with the physical world in order to improve the effectiveness, safety, and usability of specialized machines. With the advent of computers, HCI emerged as a field distinct from the study of human factors. In its early days, HCI research was still closely tied to human factors, focusing on the physical aspects of computer use, such as the shape of a keyboard or mouse. After

command-line interfaces gave way to graphical displays, the field expanded to include a range of topics relating to the visual aspects of computer displays, from human visual perception (how the eye processes sensory data) to human cognition (how the brain interprets and classifies information). As this range suggests, HCI is a broad interdisciplinary field that can include experts from a number of university departments, including computer science, engineering, linguistics, psychology, and information science.<sup>5</sup>

In addition to being an academic field, HCI is also an applied discipline with a strong presence in the private sector. Practitioners drive advances in HCI as much as—if not more than in some areas—academics do, and leading journals such as the Journal of Usability Studies and conferences such as ACM SIGCHI (Conference on Human Factors in Computing Systems)<sup>6</sup> publish work from both private sector practitioners and academics. Many major technology companies employ in-house HCI practitioners, often with titles such as User Experience Designer, Developer, or Researcher, who collaborate with visual designers to develop software and website interfaces. These practitioners are an integral part of the design and development process, and large technology companies typically will not launch online and software products until HCI practitioners have evaluated them. Companies also seek advice from independent HCI consultants.

HCI findings are typically derived from data gathered using both quantitative and qualitative methods, such as: usability inspections, usability tests, focus groups, interviews, examinations of customer feedback (both solicited and unsolicited, e.g., through customer complaints), and other

---

<sup>5</sup> <https://uxpajournal.org/>

<sup>6</sup> <https://chi2023.acm.org/>

methods. HCI research has yielded several principles of usability—or heuristics—as well as more domain-specific guidelines that can be applied to evaluate any interface. These principles are important tools for HCI practitioners tasked with evaluating software applications. By evaluating Internet content according to these principles (also called a “usability inspection”—that is, reviewing an application interface for compliance with an accepted set of heuristics—HCI experts can identify common usability problems in an interface. Many of these principles are based on “user-centered design,” a concept originated in Don Norman’s foundational text *The Design of Everyday Things*, that is employed internationally and embraced by leading websites, design consultants, and user experience/usability professionals<sup>7</sup>. Through a variety of methods, user-centered design seeks to understand application and interface design from the customer’s (user’s) point of view.

## B. Heuristic Analysis Methods

In this case, I used a heuristic evaluation (also called a usability inspection) to evaluate the Match.com interface for conformity with canonical heuristic guidelines and principles created by both academic researchers and professionals (citations made throughout as applied). A heuristic evaluation is made based on HCI principles derived from empirical research and involves the review of a user interface specifically for compliance with these principles, from a visual and information design perspective, as well as assessing the design of the interface and reviewing specific tasks from the user’s perspective.<sup>8</sup> This approach can provide similar insights to those generated through user testing without the recruitment of participants. Usability inspections can

---

<sup>7</sup> Don Norman, *The Design of Everyday Things*, Basic Books (1988).

<sup>8</sup> Agnes Deneka, Usability Inspection Methods, Trimble (April 15, 2021), <https://modus.trimble.com/news/2021-04-15-usability-inspection-methods/>

be used to examine interfaces prior to launching, or existing interfaces for flaws after they have been launched and put into use, particularly when user feedback or additional testing has identified potential problems. In this report, I limit my analysis to the design of the Match.com subscription cancellation flow within the date ranges of the evidence provided to me (2016 through 2022).

Leading researchers in the field, such as Jakob Nielsen, Ph.D., Professor Ben Schneiderman, Ph.D., Donald Norman, Ph.D., and Bruce Tognazzini have distilled the most fundamental usability principles, for example: “The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.”<sup>9</sup> They have also created sets of guidelines that address web design at a more granular level, for example, because people typically scan webpages in an “F-shaped” pattern, it is best to design content in a predictable, easily scannable way to enhance easy readability by using “information-carrying” words and stating the most important information first.<sup>10</sup> This inverted-pyramid method better sustains readership by fronting the most necessary details where users are most likely to see and engage them.<sup>11,12</sup> This report is informed by decades of usability testing and design evaluations conducted by cognitive psychologists and HCI experts.

---

<sup>9</sup> Jakob Nielsen, 10 Usability Heuristics for User Interface Design, Nielsen Norman Group (updated Nov. 15, 2020), <https://www.nngroup.com/articles/ten-usability-heuristics/>; see also Heuristic Evaluations and Expert Reviews, Usability.gov, <https://www.usability.gov/how-to-and-tools/methods/heuristic-evaluation.html>.

<sup>10</sup> <https://www.nngroup.com/articles/f-shaped-pattern-reading-web-content-discovered/>

<sup>11</sup> University of Maryland, Baltimore. UMB Website Manual, Best Practices for Web Writing. <https://www.umaryland.edu/cpa/toolbox/website-manual/prepare/web-writing/#:~:text=It's%20a%20writing%20style%20where,few%20sentences%20or%20bullet%20points.>

<sup>12</sup> Jakob Nielsen, Inverted Pyramids in Cyberspace, Nielsen Norman Group (updated 2015). <https://www.nngroup.com/articles/inverted-pyramids-in-cyberspace/>

My analysis of the Match.com cancellation flow focuses on the following aspects most relevant to a usability inspection of disclosures or other information communicated to users by an interface:

- Placement and prominence: A key issue for evaluating whether an individual design feature is effective is its placement on the screen in relation to other elements (e.g., where is it in the visual hierarchy),<sup>13</sup> as well as how prominent it is (e.g. whether it competes with other objects on the screen).<sup>14</sup> Prominence refers to how conspicuous a design feature is in relation to other textual and graphical elements on the page, as well as the grouping and alignment of the items, which provide a visual flow for the user to follow.<sup>15</sup>
- Appearance: Appearance refers to the visual elements of the disclosure, such as font selection, text size, and color.<sup>16</sup> In conjunction with placement and prominence, these elements influence how conspicuous a design element is to the user.
- User Flow Architecture: In order to understand the context in which a choice is presented and the resulting decision(s) a user must make, it is necessary to document the flow, i.e., the steps one must take through the application to arrive at a decision point, and the options available to the user after making a specific choice. By documenting these paths, one can discover potential flaws in how information is presented to users, as well as gain insight into why users take particular actions.<sup>17</sup>

---

<sup>13</sup> Jeff Johnson, *Designing with the Mind in Mind: Simple Guide to Understanding User Interface Design Guidelines* 2nd Edition (Morgan Kaufmann; 2nd edition (February 24, 2014).

<sup>14</sup> Jenifer Tidwell, Charles Brewer, and Aynne Valencia. *Designing Interfaces, 3rd Edition* (O'Reilly 2019).

<sup>15</sup> *Id.*

<sup>16</sup> Jakob Nielsen *et al.*, *Prioritizing Web Usability* (New Riders 2006).

<sup>17</sup> Louis Rosenfeld *et al.*, *Information Architecture for the Web and Beyond* (O'Reilly 2015).

- System status and feedback: Documenting what the application is telling the user about what is currently happening within the application and what occurs after she makes a decision is crucial for determining if the users understand where they are in a flow, and what their options are.<sup>18</sup> The system status includes task interruptions: instances where the user is interrupted from their primary goal to attend to a completely different task.<sup>19</sup>
- Terminology/Content Strategy: The terms used to communicate choices, system status, and feedback to the users are important for helping them understand system functions. Clear, consistent terminology is essential to user understanding. When there is a mismatch between the terms used by the application and those understood by the users, confusion can result.<sup>20</sup>
- Readability: Users generally scan online text rather than read it thoroughly, and this is particularly true with long paragraphs of text. According to Nielsen, “dense blocks of text are a major turn-off for Web users,” suggesting to users that they will have to “work hard to extract the information they want.”<sup>21</sup>
- Friction: Design friction refers to “interactions that inhibit people from intuitively and painlessly achieving their goals within a digital interface.”<sup>22</sup> A common outcome of design friction is the user exiting or abandoning the task in frustration or confusion. While there are instances of friction that help users, these cases are largely centered around interventions and systems that encourage mindful behavioral change (e.g. keeping a diet

---

<sup>18</sup> Nielsen, 10 Usability Heuristics, *supra*; Johnson, *supra* at 131.

<sup>19</sup> Michael Albers, Human-Information Interaction and Technical Communication: Concepts and Frameworks (IGI Global 2012).

<sup>20</sup> Johnson, *supra* at 131.

<sup>21</sup> Nielsen, *Prioritizing Web Usability*, *supra*.

<sup>22</sup> Victoria Young, Strategic UX: The art of reducing friction. *InfoDesign* (February 13, 2015)

journal).<sup>23</sup> These examples *do not* forgo the principles listed above or hinder users from completing desired tasks. A designer should aim to *reduce* friction that hinders users from completing desired tasks or causes users to abandon the task (or system) entirely.

The research literature demonstrates that all of these usability aspects—placement, prominence, and appearance—are critical to the effective disclosure of information. These concepts are tied to the visual hierarchy and layout of both graphical and textual elements in an interface. As Tidwell phrases it, “the most important content should stand out the most, and the least important should stand out the least.”<sup>24</sup> The point at which a design element is placed in the user flow has a direct impact on whether it is viewed and acted upon. The feedback the system provides to the user about what state the system is currently in, and what the user’s options are, has a direct effect on the user’s comprehension of a design feature and the actions they can or cannot take as a result. The terminology used to describe an action, as well as its readability on-screen, also impact whether its presentation is effective. Finally, a user interface must minimize (or eliminate) unnecessary friction that prevents the user from achieving her goals. The interface should strike a balance, allowing the user to complete their tasks easily and efficiently while minimizing room for user error.

### C. “Dark” Design Patterns

“Dark” design patterns (also called manipulative or deceptive design patterns) are design features that deceive, coerce, or manipulate users into making choices that are either not what users

---

<sup>23</sup> Anna L. Cox et al. Design Frictions for Mindful Interactions: The Case for Microboundaries. In Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '16). Association for Computing Machinery, New York, NY, USA, 1389–1397. <https://doi.org/10.1145/2851581.2892410>

<sup>24</sup> Tidwell, *supra*.

intended, or are not in their best interests. This report analyzes whether the design of Match.com's cancellation flow used dark design patterns.

As background, in the visual design literature, design patterns are “reusable/recurring components which designers use to solve common problems in user interface (UI) design,” such as navigation menus for webpages or mobile devices.<sup>25</sup> Architect Christopher Alexander characterizes design patterns as well-verified solutions to recurring problems that are *replicable* and *adaptable* to each designer’s case, preferences, and local problem conditions.<sup>26, 27</sup> Design patterns are helpful hallmarks for designers in answering problems quickly and efficiently; however, some variants of these patterns routinely work against users’ interests. Design patterns are adopted as best practices based on results from user research and practitioner experience, with an expectation that they represent a benefit to the user, in terms of efficiency, minimal cognitive burden, or simplicity. Online interfaces should *reduce* users’ cognitive load: “the amount of mental resources that is required to operate the system.”<sup>28</sup> This might be accomplished by designing based on existing mental models, design layouts, and labeling; or minimizing unhelpful text, images and links. Thoughtful design reduces unnecessary friction, thus minimizing the amount of energy users have expend on a task.

Dark patterns are similar sets of recurring design components but are instead optimized for the benefit of the designer, usually at the direct expense of the user, most commonly in terms of user

---

<sup>25</sup> User Interface (UI) Design Patterns, Interaction Design Found., <https://www.interaction-design.org/literature/topics/ui-design-patterns/>.

<sup>26</sup> Christopher Alexander, *A Pattern Language: Towns, Buildings, Construction*. Oxford University Press. (1977).

<sup>27</sup> <https://www.designsystems.com/christopher-alexander-the-father-of-pattern-language/>

<sup>28</sup> Kathryn Whitenton, Minimize Cognitive Load to Maximize Usability. (December 22, 2013). <https://www.nngroup.com/articles/minimize-cognitive-load/>

financial loss or an unwanted expenditure of the user’s money.<sup>29</sup> Dark patterns may also require or coerce users to disclose more personal information (violate privacy) or spend more attention or time (maximize engagement) on a website or feature than users would ideally desire. The term “dark patterns” was popularly coined in 2010 by designer Harry Brignull, who described them as “tricks used in websites and apps that make you do things that you didn’t mean to, like buying or signing up for something.”<sup>30</sup> More recently, Mathur *et al.* defined dark patterns as user interface design choices that benefit an online service by coercing, manipulating, or deceiving users into making unintended and potentially harmful decisions.<sup>31</sup> An emerging literature has grown around cataloging deceptive retail practices in e-commerce and documenting dark patterns across additional contexts, such as privacy and online video gaming.<sup>32</sup> In recent years, Harry Brignull has opted for the term “deceptive design patterns,” emphasizing the routine manipulation at play. These mechanisms can be *replicated* by several online services and *adapted* into their user flows, depending on the goal of deception. “Dark patterns” or “deceptive design patterns” routinely hinder users’ goals and undermine their choices or individual agency. Collections of examples are available at [Deceptive.design](https://deceptive.design/)<sup>33</sup>, Professor Colin Gray’s [UXP<sup>2</sup> Lab website](https://darkpatternsuxp2.com/)<sup>34</sup>, and the [Dark Patterns Tip Line](https://www.darkpatternstipline.org)<sup>35</sup>, the crowdsourced website that I co-manage.

---

<sup>29</sup> While “designers” (e.g., visual designers or engineers) may be the individuals who actually implement dark patterns in practice, the term is a proxy for whomever or whatever is benefitting from their use. For a discussion of the user’s best interest see Gray 2018. Also, see generally: <https://darkpatternsuxp2.com/>.

<sup>30</sup> Harry Brignull, What are Dark Patterns?, Dark Patterns, <https://deceptive.design/>.

<sup>31</sup> See: Mathur 2019, 2021.

<sup>32</sup> Mathur 2019.

<sup>33</sup> <https://deceptive.design/>

<sup>34</sup> <https://darkpatternsuxp2.com/>

<sup>35</sup> <https://www.darkpatternstipline.org>

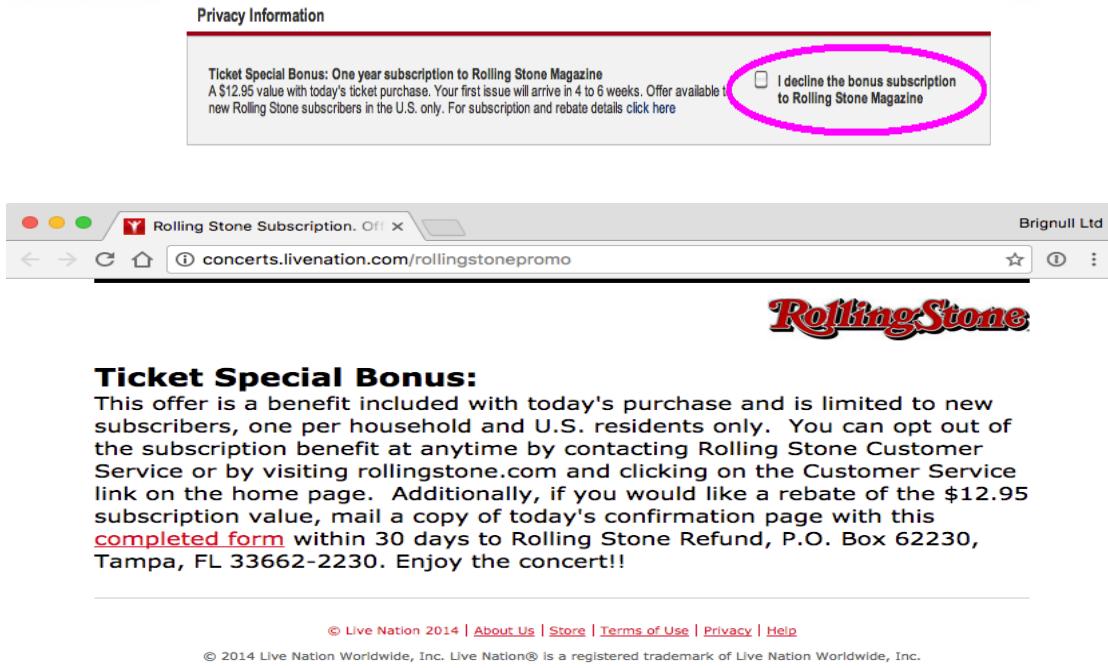
While dark patterns can be (and often are) intentionally designed to achieve their outcomes, classifying a design pattern as “dark” or “deceptive” does not require proving a designer’s or company’s intent to deceive, coerce, or manipulate the user. It is possible to unintentionally create a dark pattern through poor or sloppy design choices or by not testing or evaluating a design pattern either prior or after launch. Inexperience, or lack of familiarity with established design principles and heuristics can also exacerbate the problem. As such, this report identifies several dark patterns in Match.com’s service and cancellation flow, including:

- Roach Motel: Brignull describes the “roach motel” as when “the design makes it very easy for you to get into a certain situation, but then makes it hard for you to get out of it (e.g. a subscription).”<sup>36</sup> Examples of the “roach motel” pattern include requiring customers to cancel “opt out” subscriptions that were billed to them as a default option, as well as the general disproportionality of making canceling a subscription more difficult than signing up for one, often by requiring the customer to call or online chat with a customer service agent instead of providing a simple online option. Match.com attracts users to their subscription services with Guarantee Extensions and emails from “interested” users.<sup>37</sup> But, as this report discusses, canceling a subscription proves to be a lengthy process, including extraneous steps, such as a password authentication step and multiple pages of survey questions: this process can take *eight* steps.

---

<sup>36</sup> Brignull, *supra*.

<sup>37</sup> This fails to differentiate legitimate and fraudulent communications (users who are under review for fake profiles, soliciting, etc.).



**Figure 1: Example of Rolling Stone’s 2014 “Roach Motel” Subscription Cancellation Process<sup>38</sup>**

- Hidden Information: Match.com frequently hides or fails to disclose relevant information to users. For example, the survey included in the cancellation process is actually optional: it is possible for users to click through the entire process and cancel without providing answers. However, this fact is *never stated* during the cancellation process, nor are users asked if they want to complete the survey. Moreover, statements such as “Tell us more,”

---

<sup>38</sup> Brignull, *supra*.

and “Before you go, help us make Match.com better” lead users to believe the survey is compulsory.

These patterns are classified under a range of strategies identified to harm or deceive users.<sup>39</sup> “Roach Motel” is an *obstruction* strategy which makes user tasks more difficult than necessary by adding extraneous barriers and excess friction, such as a password authentication step and surveys. “Hidden Information” is an *interface interference* strategy which visually manipulates the interface to reduce discoverability of user-desired options. Finally, “Forced Continuity” is a *sneaking* strategy, intended to delay discovery of important information (including information that would cause users to revoke service if presented earlier).

In addition to the questions of conformance to design heuristics described earlier, this report’s analysis draws upon the empirical research literature on dark patterns. This report is framed in this way because while dark patterns do often violate design heuristics, they are not simply isolated issues of poor design by a single company; instead, they fit into the larger instance of dark patterns emerging across multiple sectors of e-commerce companies.<sup>40</sup> However, the mere fact that multiple companies have engaged in this form of deceptive design does not validate its use or diminish its negative effects on users.

---

<sup>39</sup> Id.

<sup>40</sup> See generally: Caroline Sinders and Sebastian Rieger, Policy Brief: Dark Patterns - Regulating Digital Design, Stiftung Neue Verantwortung (May 13, 2020), <https://www.stiftung-nv.de/en/publication/dark-patterns-regulating-digital-design/>.

## 4. Heuristic Analysis of Match.com's Cancellation Flow

This section presents the findings of my heuristic analysis of Match.com's cancellation flow. As introduced in Section 3, a heuristic analysis is an expert review of an interface for conformance with principles of usability and visual design, as well as an assessment from the user's perspective.<sup>41</sup> I start with a descriptive overview of the Match.com cancellation flow for the three dates for which I was provided evidence: 2016, 2019, and 2020, using 2016 as the starting point, and then contrasting that flow with changes introduced in the following years. Next, I describe my findings from the heuristic analysis. I first analyzed the cancellation flow for its conformance with canonical principles of usability and design. I discuss the areas in which I found the flow violated these principles, as well as practitioner design norms (*e.g.*, common best practices for subscription cancellations). Next, I discuss the specific forms of dark patterns I identified in the cancellation flow. Dark patterns are design patterns that violate principles of usability by taking advantage of common biases in human decision-making to manipulate, mislead, confuse, or deceive users. Relatedly, as mentioned earlier in this report, some instances of dark patterns also can include unnecessary or arduous friction into a design pattern and into a design process. Similar to legitimate design patterns, dark patterns have evolved through their adoption and use by companies and designers to become reusable design components or techniques that create decisional interference that benefits the company or designer at the expense of the user. I found multiple examples of dark patterns in the cancellation flow.

---

<sup>41</sup> Jakob Nielsen, How to Conduct a Heuristic Evaluation, Nielsen Norman Group (Nov. 1, 1994), <https://www.nngroup.com/articles/how-to-conduct-a-heuristic-evaluation/>.

Part of what makes a dark pattern a dark pattern is its subversion of design patterns; design patterns are “are reusable/recurring components which designers use to solve common problems in user interface design. For example, the breadcrumbs design pattern lets users retrace their steps.<sup>42</sup> Designers can apply them to a broad range of cases, but must adapt each to the specific context of use.<sup>43</sup>” Design patterns are a part of the online digital commons; users are taught through the repeated use of design patterns to build a mental model of how a product functions. It’s the subversion of users’ expectations with respect to these common design patterns that creates confusion, manipulation, and deception (*i.e.*, dark patterns).

I conclude this section with a summary of these findings and how they work to create a confusing and friction-filled experience for customers. I also examine supporting documentation from Match.com employees discussing issues with the cancellation provided to me by the FTC.

## A. Overview of Match.com Cancellation Process

The FTC’s amended complaint alleges that Match.com has used a “confusing and cumbersome cancellation process that causes consumers to believe they have canceled their subscriptions when they have not” since at least 2013.<sup>44,45</sup> For my analysis I was provided with recordings and screenshots of the cancellation process from the years 2016, 2019, and 2022. In this section, I will

---

<sup>42</sup> Breadcrumbs are “a list of links representing the current page and its “ancestors” (parent page, grandparent page, and so on), typically going all the way back to the site homepage.” <https://www.nngroup.com/articles/breadcrumbs/>

<sup>43</sup> <https://www.interaction-design.org/literature/topics/ui-design-patterns>

<sup>44</sup> First Amended Complaint, p. 2.

<sup>45</sup> From images in the file MATCHFTC703998, it appears that the cancellation flow screens have been static since at least 2011 based on dates that appear on some screenshots in the file, but given the poor resolution of the images in this file we cannot use it for detailed analysis.

provide an overview of the cancellation process starting in 2016, and then highlight the changes I observed in 2019 and 2022, calling out the specific concerns I have regarding aspects of the cancellation process that could cause customer confusion. Confusion can manifest in many ways, such as customers abandoning the cancellation process before completion, customers misunderstanding the cancelation process and failing to complete it, and customers who seek other means by which to cancel their accounts due to frustrations with the process.<sup>46</sup> I must note that it appears that the evidence that I have been provided reflects users who had subscribed accounts (rather than customers with free accounts), meaning that there may be steps or menu items that are different for free/non-subscribed users across all three versions I reviewed. All of the evidence I reviewed appeared to be collected on a desktop or laptop computer running Windows; I was not asked to review the cancellation process on a mobile device or operating system, nor to offer an opinion about these processes on mobile devices.

All told, from the initiation step (selecting settings) to the confirmation page, this process typically takes the user at least eight steps:

1. Select Settings icon/click “Settings” link from drop-down menu from Match.com universal site header
2. Land: Account Settings page. Select “Change/Cancel Membership” link.
3. Land: Password entry screen. Enter password and click “Continue Cancellation” button.
4. Land: Page 1 of cancellation flow: Click “Cancel Subscription” from subscription options page.
5. Land: Page 2 of cancellation flow: Survey page S1; click “click “Continue Cancellation” button.
6. Land: Page 3 of cancellation flow: Retention offer; click “No thanks, I want to resign.”<sup>47</sup>
7. Land: Page 4 of cancellation flow: Survey page S2; click “Continue Cancellation” button.

---

<sup>46</sup> Per screenshots provided to me by the FTC, as well as document MATCHFTC703998, other pathways appear to include online chat (within a specific time window) with a customer service agent, or email correspondence.

<sup>47</sup> It appears that some users may have not received the retention offer page depending upon which survey answer they clicked (i.e., “I met someone). However, I do not have enough evidence to reliably determine how frequently that occurred.

8. Land: Page 5 of cancellation flow: Cancellation confirmation page.<sup>48</sup>

**Table 1: Primary steps in the 2016 Match.com Cancellation Process.**

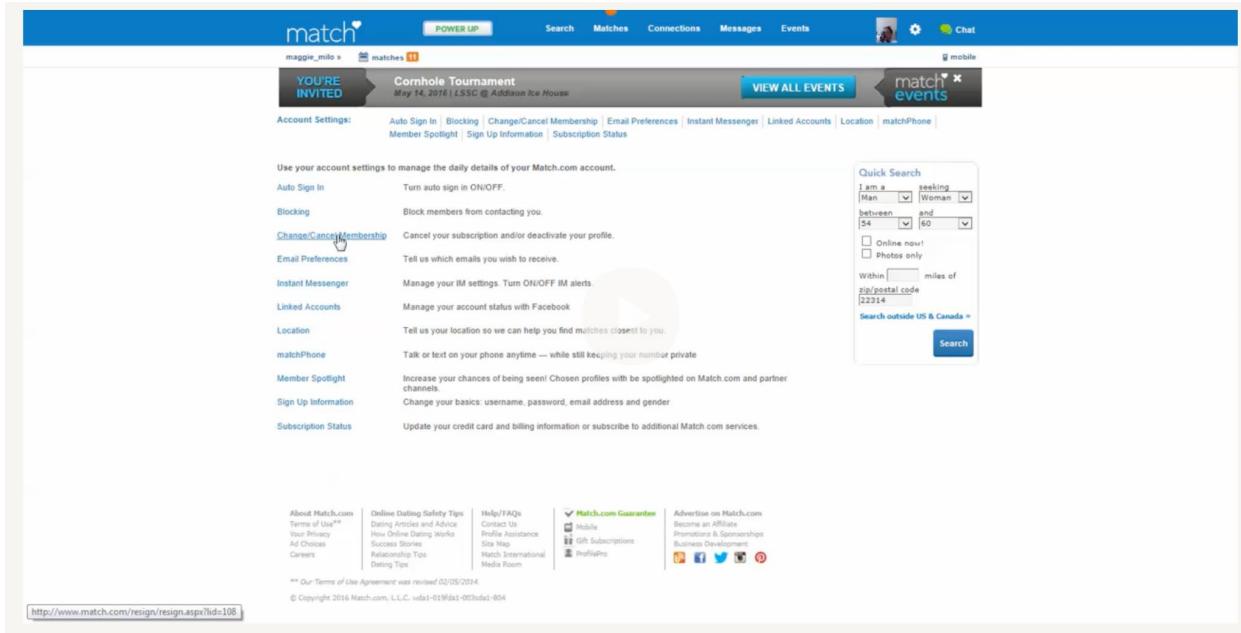
To be clear, these steps do not include any additional tasks presented to users, such as answering all of the survey questions on Pages 2 and 4.

I. 2016 Cancellation Process

The first screen recording of the process provided to me is MATCHFTC761906.mp4, which based on copyright notices viewable on the capture appears to have been recorded in 2016. While some aspects of the site design have changed over time, the core navigation appears to be similar across the years: presumably, accessible from most pages of the website, the universal site header contains an account settings icon (shaped like a gear). When clicked, a submenu appears that contains a link to “Settings;” when clicked, the “Settings” link takes the user to a page entitled “Account Settings.” This page consists of eleven account settings-related links, listed in alphabetical order, as well as navigation “breadcrumbs” viewable at the top of the page beneath the main navigation banner and the native ad banner that indicate which page of the Account Settings one was visiting, which is consistent through the remainder of the flow.

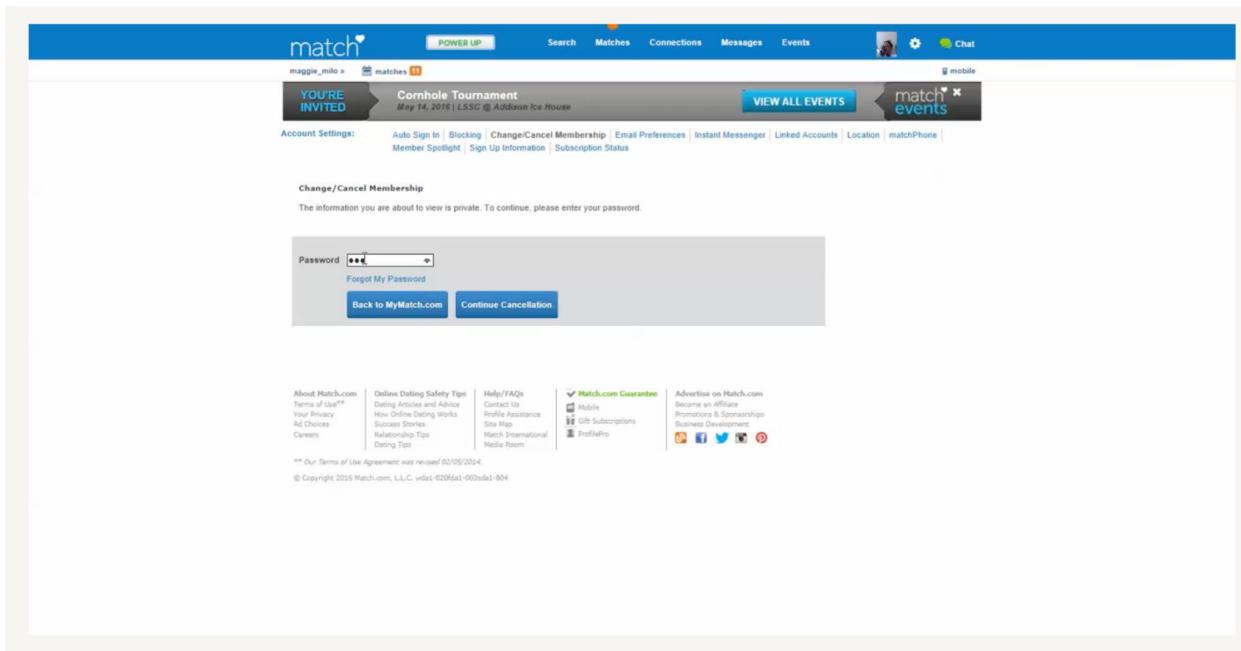
---

<sup>48</sup> In MATCHFTC703998, which appears to be a guide for customer service agents dated 11/10/2015, the cancellation process is documented as taking 11 steps.



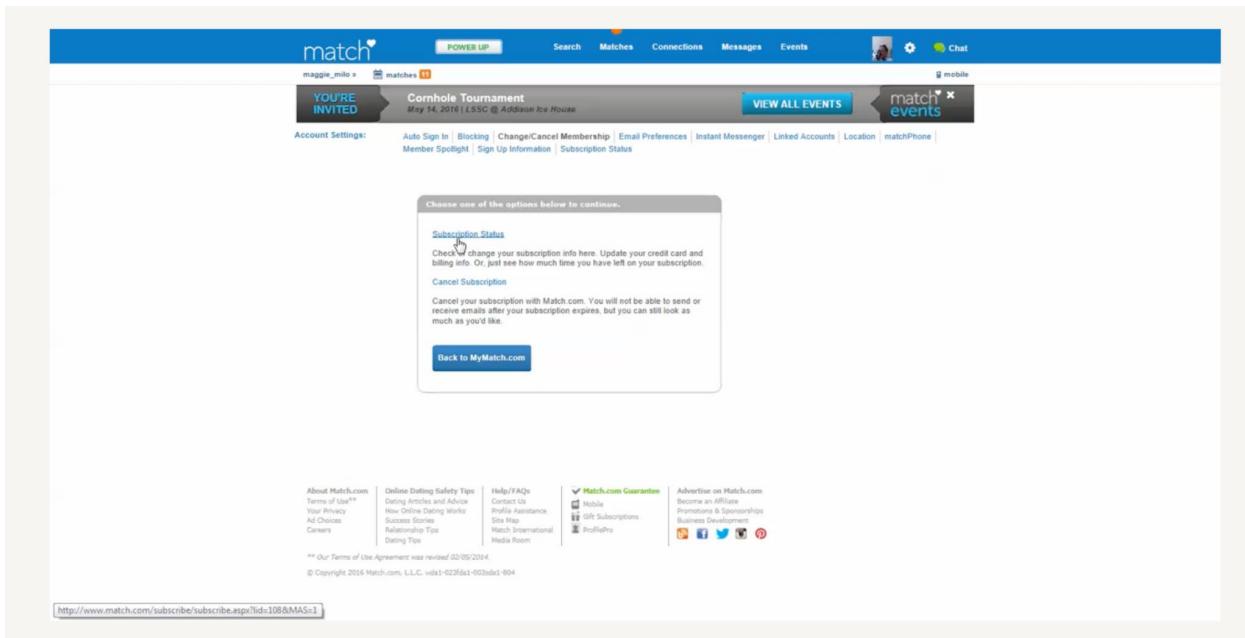
**Figure 2: 2016 Account Settings Page**

On this page, one first can access the “Change/Cancel Membership” link (third item in the list), with the text “Cancel your subscription and/or deactivate your profile,” which initiates the cancellation flow. After locating the link, when clicked, the user is shown a password entry screen, which requires the user to enter her password before proceeding in the cancellation flow.



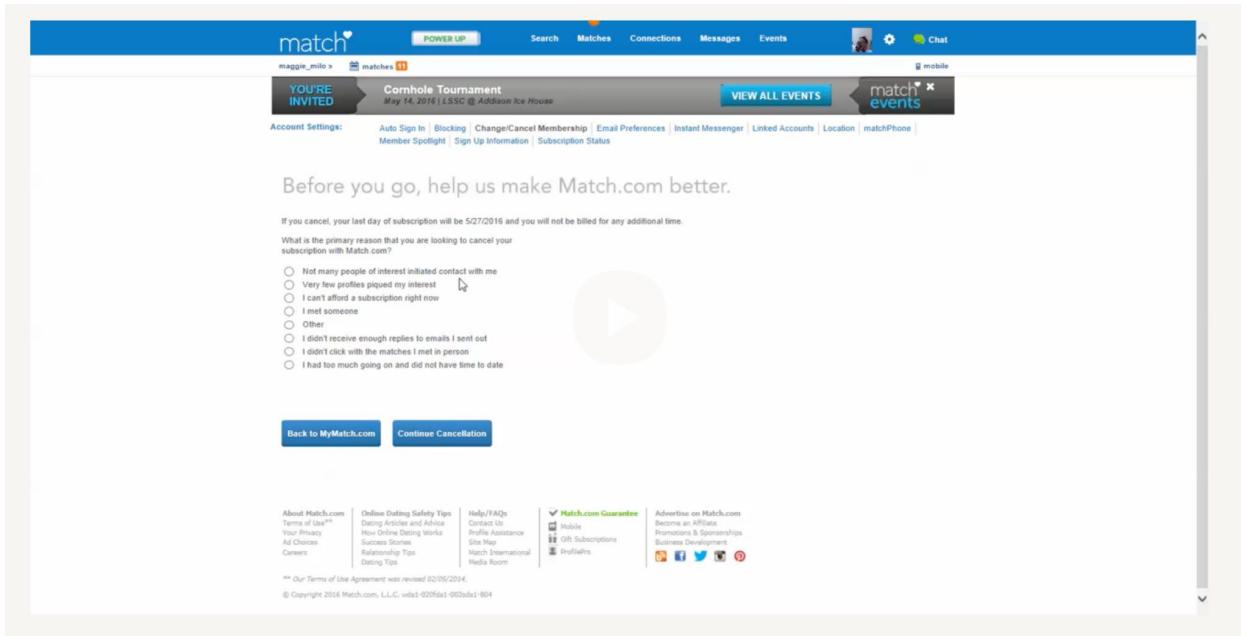
**Figure 3: 2016 Password Authentication Page**

The breadcrumbs update to show the “Change/Cancel Membership” link in a non-selectable state to indicate which portion of Account Settings the user is presently visiting. If the user successfully enters her password, she then lands on the first page (Page 1) of the cancellation flow: a subscription options page with three choices: “Subscription Status,” “Cancel Subscription” or “Back to MyMatch.com” This page features the first instance of a dark pattern that persists into the 2022 cancellation flow: only the “Back to MyMatch.com” link is rendered as a button, with the same blue button styling present throughout the rest of the cancellation flow. The “Subscription Status” and “Cancel Subscription” links are rendered as blue hyperlinks in text above; their lack of button design makes it harder to spot the “Subscription Status” and “Cancel Subscription” choices.



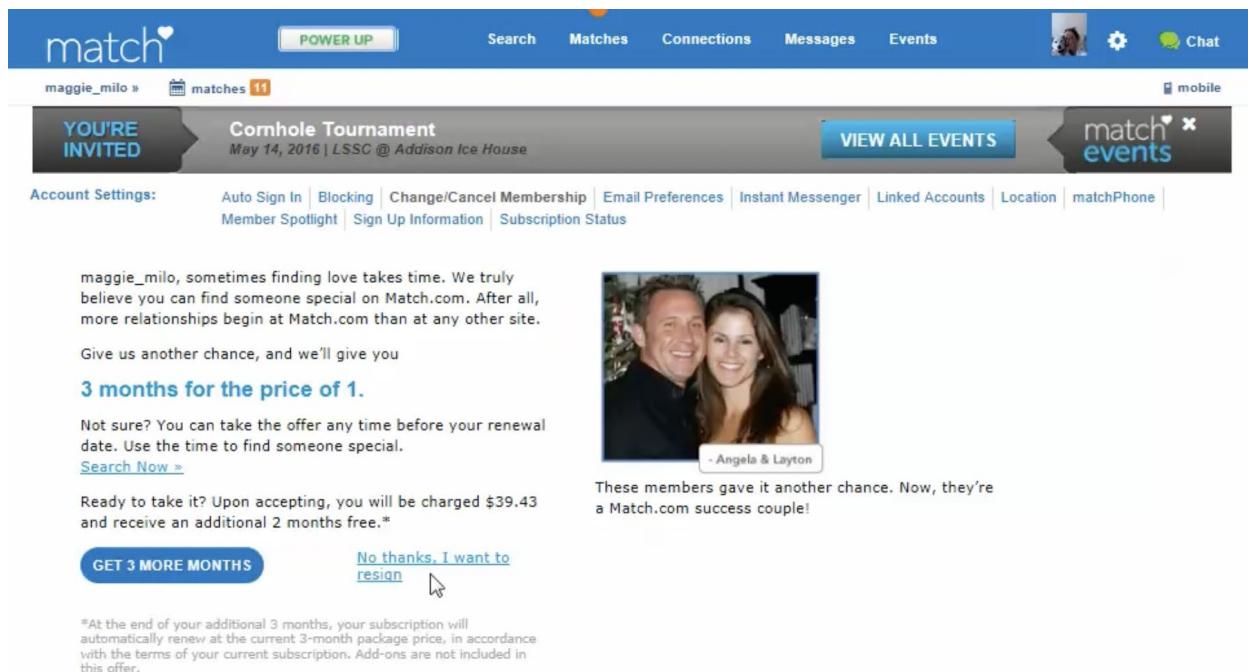
**Figure 4: Page 1 of the 2016 Cancellation Flow**

If the user identifies “Cancel Subscription” as a clickable element and clicks it, she then lands on Page 2 of the flow, which features a survey question beneath the headline, “Before you go, help us make Match.com better.” There are eight survey answer options on this page, selectable with a radio button. The survey answers are not indicated as optional, though it is possible based on actions documented in Match Cancellation Process\_10-12-2022.wmv that one can simply ignore the survey questions and proceed with the cancellation by clicking the “Continue Cancellation” button beneath the survey answers, which I will discuss later. Selecting any of the answers will auto-generate between one to two additional survey questions, again presented with radio buttons and not indicated as optional, for a minimum of at least four throughout the entire survey portion. Beneath the survey answer options are two buttons, each blue, the left button labeled “Back to MyMatch.com,” the right labeled “Continue Cancellation.”



**Figure 5: Page 2 of the 2016 Cancellation Flow**

Once the user clicks the “Continue Cancellation” button, she is taken to Page 3 of the flow, a marketing page, where the user is given a retention offer. In the 2016 version, the options at this stage were “GET 3 MORE MONTHS” (displayed as a blue clickable button) or “No thanks, I want to resign” displayed as a blue text hyperlink. Notably, this button differs from the other buttons in the flow both in shape (oval, versus rectangular), styling (a different, new shade of blue for the background, the shadow which gave the previous button a more ‘3D’ or physical feel is now removed, and a new font style and new darker color for the font and text is also used) and in labeling (using all-caps instead of lowercase). There is also no headline on this page. In order to proceed with cancellation, the user must click the “resign” hyperlink, which lands on a second survey page, entitled “Tell us more.” I will discuss the issues with these inconsistencies and the use of the hyperlink below.



**Figure 6: Page 3 of the 2016 Cancellation Flow.**

On the 2016 version of this next page, the user is presented with the question “In your own words, how can we make finding love easier?,” with an open-response text box that allows for the entry of 1000 characters of text. This page now returns to the original design of the cancellation flow, with the buttons changing back to rectangular boxes, the original styling, and original wording. Beneath are two new survey questions, a write in question of “How likely is it that you would recommend Match.com to a friend?,” with a Likert-scale survey answer widget underneath it, numbered 1-10, with radio button selectors to pick choices on a scale from “Not Likely” to “Very Likely.” Beneath this widget, there is text informing the user of the benefits she will lose by

canceling.<sup>49</sup> Beneath this are two blue buttons, identical to the buttons on Page 2 of the flow. Clicking “Continue Cancellation” lands the user on Page 4 of the flow, the cancellation confirmation page. This page features a headline, “Your subscription has been canceled.”, provides a confirmation number for the user, and indicates the last day the user’s subscription will be active.

The screenshot shows the Match.com website with a blue header bar. On the left, it says "maggie\_milo » matches 11". In the center, there's a banner for "Cornhole Tournament" on "May 14, 2016 | LSSC @ Addison Ice House" with a "VIEW ALL EVENTS" button. On the right, there's a "match events" section. Below the header, a navigation bar includes "Search", "Matches", "Connections", "Messages", and "Events". On the far right are icons for profile, settings, and chat, along with a "mobile" link.

**Account Settings:** Auto Sign In | Blocking | Change/Cancel Membership | Email Preferences | Instant Messenger | Linked Accounts | Location | matchPhone | Member Spotlight | Sign Up Information | Subscription Status

**Tell us more.**

In your own words, how can we make finding love easier?

1000 characters remaining

How likely is it that you would recommend Match.com to a friend?

← Not Likely      Very Likely →

<input type="radio"/>										
0	1	2	3	4	5	6	7	8	9	10

If you cancel now, you will lose these benefits once your subscription ends:

- You won't know who's viewed your profile
- No more sending and responding to emails
- You risk losing your current monthly rate

**Back to MyMatch.com**    **Continue Cancellation**

**About Match.com**  
Terms of Use\*\*  
Your Privacy  
Ad Choices  
Careers

**Online Dating Safety Tips**  
Dating Articles and Advice  
How Online Dating Works  
Success Stories  
Relationship Tips  
Dating Tips

**Help/FAQs**  
Contact Us  
Profile Assistance  
Site Map  
Match International  
Media Room

**Match.com Guarantee**  
Mobile  
Gift Subscriptions  
ProfilePro

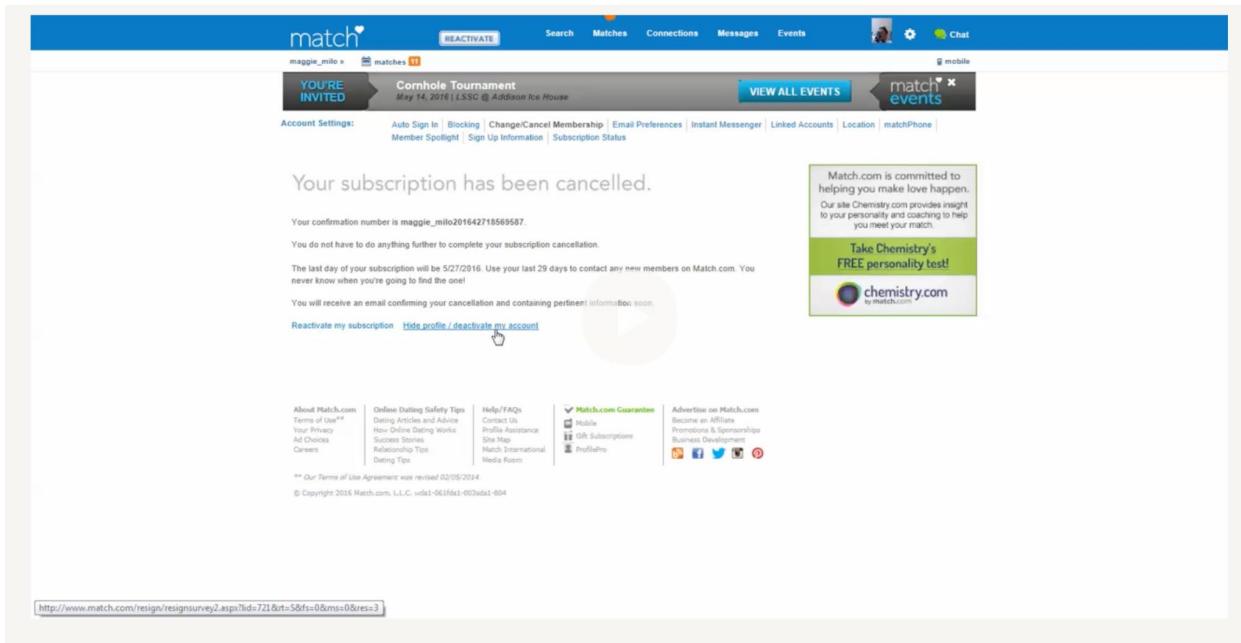
**Advertise on Match.com**  
Become an Affiliate  
Promotions & Sponsorships  
Business Development

Social media links: YouTube, Facebook, Twitter, Instagram, Pinterest

\*\* Our Terms of Use Agreement was revised 02/05/2014.

**Figure 7: Page 4 of the 2016 Cancellation Flow.**

<sup>49</sup> Each bullet point includes blue text that appears to be hyperlinks, but I did not see video evidence that demonstrated whether these were in fact links, and where they led if clicked.



**Figure 8: 2016 Cancellation Confirmation Page**

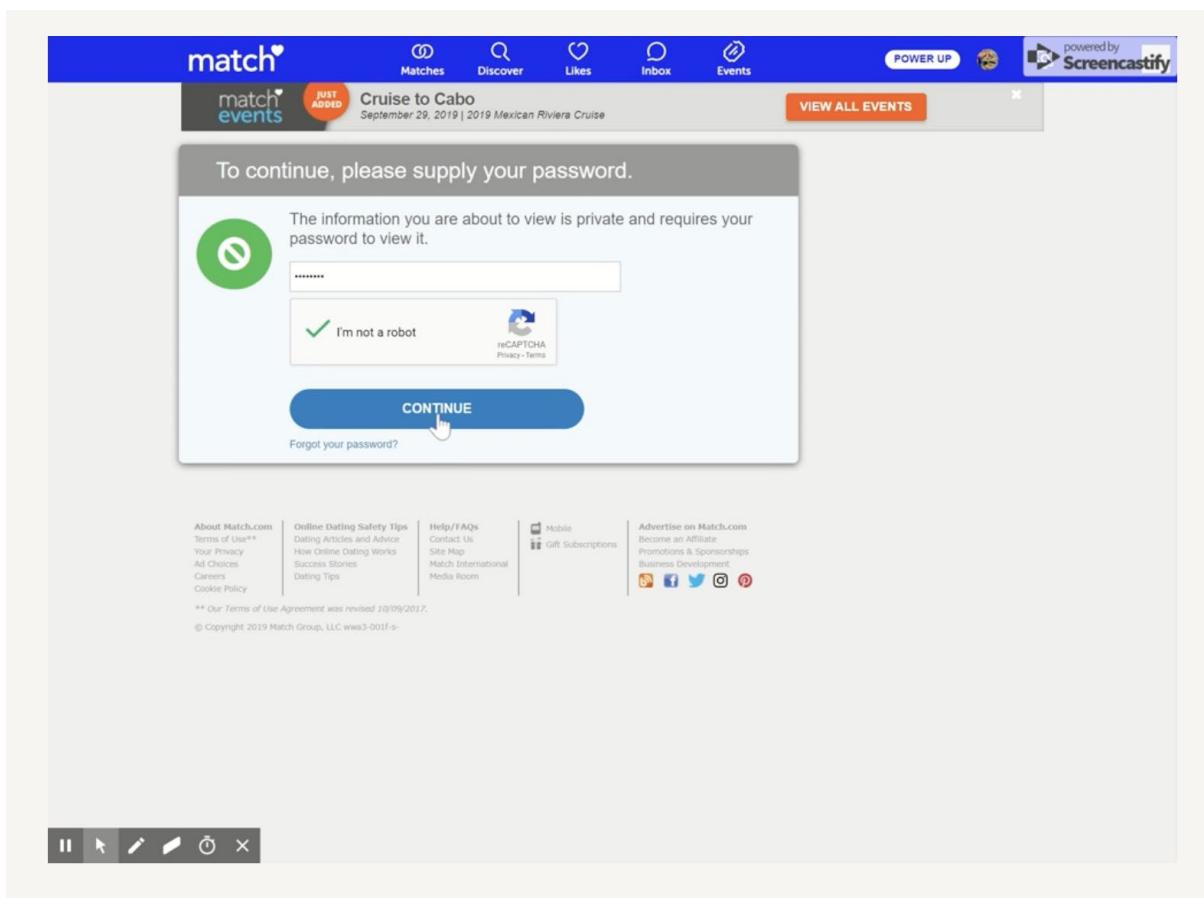
## II. 2019 Cancellation Process

The next version of the cancellation process for which I was provided documentation is from 2019.<sup>50</sup> In this section, I will review the substantive changes between this version and 2016; the number of primary steps from selecting Settings to the confirmation page remain the same (typically eight steps).

While the look and feel of the Match.com site was updated since 2016, the primary steps and screens remain intact with some substantive changes. The first substantive change is a redesign of Step 3, the password entry screen. While the previous version was primarily text-based and used

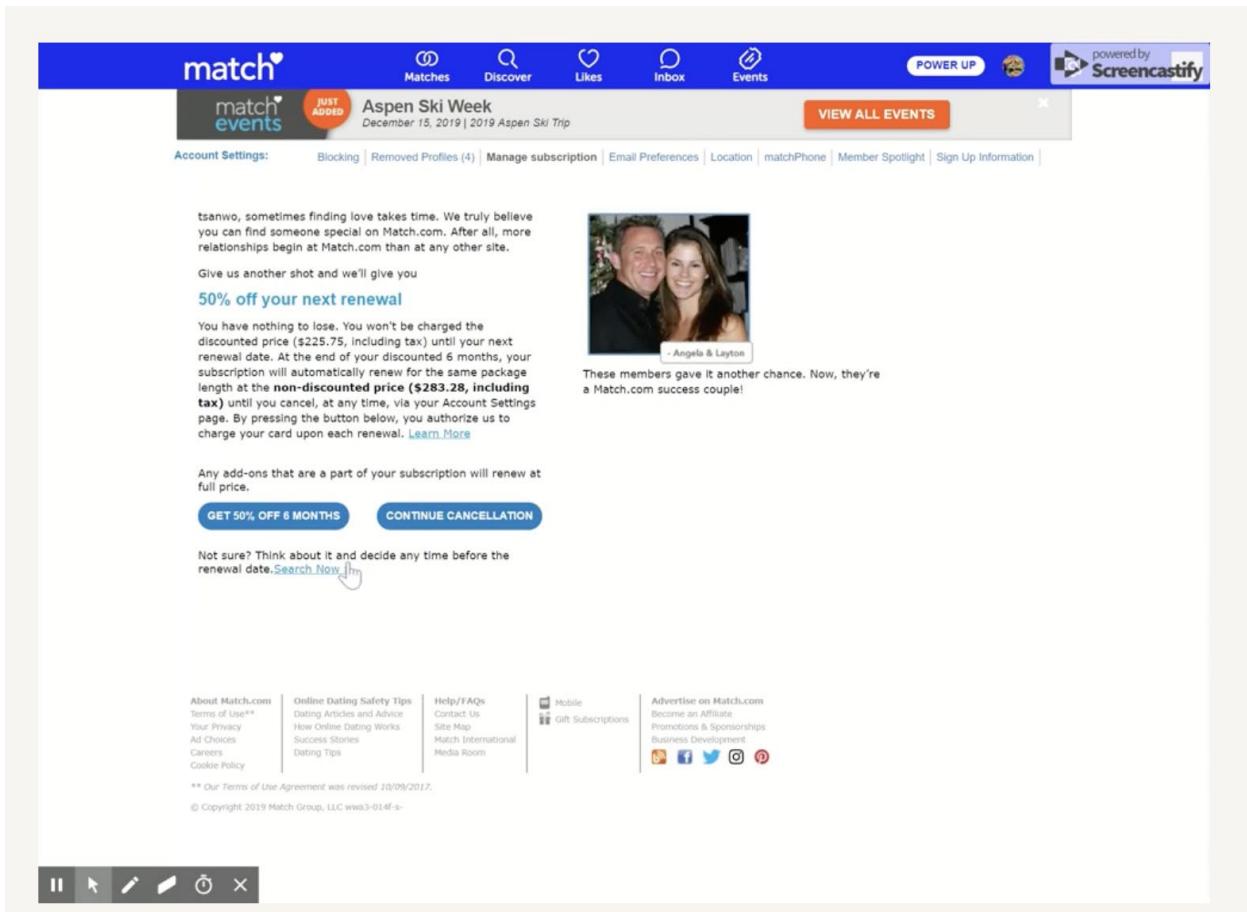
<sup>50</sup> MATCHFTC672309.mp4

the same blue buttons viewable later in the flow (including a “Continue Cancellation” button), the new version introduces new graphical design elements and includes a CAPTCHA widget, which if invoked by the system can add an additional step of completing the CAPTCHA image selection task. This new design element appears to obscure the Account Settings breadcrumbs (navigation elements) that are still observable on subsequent pages at the top of the page beneath the main navigation banner and the native ad banner that indicated which page of the Account Settings one was visiting.



**Figure 9: The 2019 Password Authentication page**

The second substantive change is on Page 3 of the cancellation flow, the retention offer. Here, the “No thanks, I want to resign” text link has been replaced with a button; now, there are two buttons, the left button with the current offer (“GET 50% OFF 6 MONTHS”), and “CONTINUE CANCELLATION.” Again, as in 2016, these buttons are stylistically different from the blue buttons used elsewhere in the cancellation flow.



**Figure 10: 2019 Retention offer page (Page 3)**

The third substantive change is on Page 4 of the cancellation flow, where the “In your own words, how can we make finding love easier?” question and open-response text box have been removed, leaving the Likert-scale survey answer widget and accompanying question.

### III. 2022 Cancellation Process

The final version of the cancellation process for which I was provided documentation is dated 2022.<sup>51</sup> In this version, the Match.com website’s visual style has undergone additional updating; The Account Settings page is redesigned, with eight menu options instead of the previous eleven. The “Change/Cancel Membership” has been removed; “Manage Account” is the replacement, first in the list, with a “Manage Subscription” link beneath. The breadcrumb-style navigation has been replaced by a split-screen design with the menu options running along the left side of the screen. While these options appear to be persistent for some of the menu items, when one clicks the “Manage Subscription” link, this split-screen design disappears and subsequent pages in the flow lack either breadcrumbs or the split-screen menu items.

---

<sup>51</sup>MATCHFTC672321.wmv; Match Cancellation Process\_10-12-2022.wmv.

The screenshot shows the Match.com account settings interface. At the top, there's a blue header bar with the Match logo and various navigation icons: Discover, Highlights, Search, Likes, Matches, Events, Power up, a profile icon, and a gear icon. A small dropdown menu is open over the gear icon, showing 'settings' (highlighted with a mouse cursor), 'help', and 'sign out'. The main content area has a white background. On the left, a sidebar titled 'Account settings' lists several options: Manage account, Visibility, Blocked profiles, Removed profiles, Email notifications, Mobile push notifications, Site notifications, and Verify your account. To the right, under the heading 'Manage account', there are links to edit name, email, password, age, and manage subscription. At the bottom of the page, there are footer links for About Match, Terms of Use, Community Guidelines, Blog, Cookie Settings; Help/FAQs, Your Privacy, Safety Tips, Advertise, Intellectual Property; Careers, Cookie Policy, Media Room, Success Stories; and social media links for Instagram, Twitter, and Facebook.

match.

Discover Highlights Search Likes Matches Events Power up

settings help sign out

Account settings

Manage account

Visibility

Blocked profiles

Removed profiles

Email notifications

Mobile push notifications

Site notifications

Verify your account

Manage account

Edit name

Edit email

Edit password

Edit age

Manage subscription

About Match

Help/FAQs

Careers

Terms of Use

Your Privacy

Cookie Policy

Community Guidelines

Safety Tips

Media Room

Blog

Advertise

Success Stories

Cookie Settings

Intellectual Property

m. © Copyright 2022 Match Group, LLC

Instagram Twitter Facebook

Figure 11: 2022 Account Settings page

## B. Analysis of Cancellation Process

The FTC’s amended complaint alleges that the cancellation process “causes consumers to believe they have canceled their subscriptions when they have not.” Upon reviewing the multiple iterations of this cancellation process, I believe this conclusion is supported by both the website evidence and the company documents I reviewed: the cancellation process caused substantial confusion for many consumers. Additionally, I expect that some customers found the cancellation flow frustrating enough, or were stymied by the password authentication step, that they were compelled to contact Match.com’s customer service in order to cancel their subscriptions, which could add additional time or complexity to the process. In this section, I review the factors that I believe caused this confusion.

## I. Violation of Usability Heuristics

The Match.com cancellation flow across the three versions I reviewed violates several of the principles of website usability, as proposed and refined by Dr. Jakob Nielsen,<sup>52</sup> in a manner that could lead to customer confusion. The issues I review here are compounding, meaning that any single one in isolation may not have been enough to cause substantial confusion, but additively working in tandem, all contribute to a lack of clarity about how to successfully cancel one’s Match.com account.

### a. Visibility of System Status

Nielsen defines this principle as: “The design should always keep users informed about what is going on, through appropriate feedback within a reasonable amount of time.” I observed a violation

---

<sup>52</sup> Jakob Nielsen. “10 Usability Heuristics for User Interface Design.” Nielsen Norman Group, April 24, 1994 (Updated Nov. 15, 2020). <https://www.nngroup.com/articles/ten-usability-heuristics/>. Based on: Nielsen, J. (1994). Enhancing the explanatory power of usability heuristics. Proc. ACM CHI’94 Conf. (Boston, MA, April 24-28), 152-158.

of this principle in the cancellation process from a lack of consistent signaling to the user each step in the cancellation process and her present place within those steps. While the 2016 and 2019 versions use breadcrumb navigation to indicate to users that they remained in the cancellation flow throughout the process, breadcrumbs were eliminated in the 2022 version I reviewed. However, the existence of breadcrumbs alone aren't necessarily a guarantee that all users will clearly understand the current step they are in, especially given a lack of labeling of steps in the cancellation process across all versions. All versions lack a simple, clear label (e.g., "Step 3 of 5," "Page 4 of 6") indicating to users precisely where they are in the process, and this is not a problem that breadcrumbs alone can solve. The only other signal is the presence of a "Continue Cancellation" button on most, but not all, pages. The elimination of breadcrumbs from the 2022 version, coupled with a lack of discrete steps, means that a user can be several steps into the laborious cancellation process and struggle to understand what remains, or whether they are still in the cancellation process at all given its inconsistency. I will discuss this in more detail below.

b. Consistency and Standards

Nielsen describes consistency as: "Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform and industry conventions." The Match.com cancellation process violates this principle in several ways. The primary example is on Page 3, the retention offer page. Across the three versions of the flow, this page stands out for its inconsistency with the pages before and after it; it appears to be using a different stylesheet to render the buttons on the page, which are designed and labeled differently from the other pages, as it also lacks a page title. The experience is such that it appears to be an advertisement inserted into the cancellation process, rather than an actual step in the process itself. As a consequence,

some users may have become confused and assumed that they had left the cancellation process when arriving on this page, abandoning the flow.

The lack of “Continue Cancellation” button on the 2016 version of this page (Figure 6) is also egregious, especially given the use of such a button the preceding and anteceding pages as the only means of signaling continuity in the process; the use of a text link and the “resign” language undoubtedly caused substantial confusion to consumers, which I will discuss in more depth later in this report. I see this mixing of links and buttons on page 1 (Figure 4) as well, where the primary tasks on this page (Subscription Status and Cancel Subscription) are links that could easily be confused as headers, while the only button on the page (the primary call to action) takes the user back to MyMatch.com. Another consistency issue, which I will expand upon later, is the use of password authentication for access to the subscription cancellation flow. Beyond the initial website sign-in, which Match.com customers may have been able to stay signed-in to their accounts for extended periods of time, it does not appear from my review of the evidence that any other portion of the website after the user initially logged in required password authentication other than the subscription cancellation flow. The arbitrary placement of a password authentication mechanism at this specific point, and not at other points on the website where sensitive information could be accessed and changed without the account holder’s knowledge, suggests that the password authentication was placed at this point as an obstacle for users to access the cancellation flow. (I discuss the password authentication step in more detail below.)

c. Aesthetic and Minimalist Design

Finally, Nielsen describes this final principle as: “Interfaces should not contain information that is irrelevant or rarely needed. Every extra unit of information in an interface competes with the

relevant units of information and diminishes their relative visibility.” The Match.com cancellation process violates this principle by inserting extraneous, unnecessary steps, making it far longer than necessary and subjecting its users to excess interactions that increase their cognitive load and makes it more likely that users will abandon their task mid-flow. The insertion of both the survey flow, as well as the retention offer, directly into the cancellation flow adds extraneous, unnecessary information and steps that could have easily been placed after the completion of the cancellation step, or designed in a way that could have been less taxing.

Another way the cancellation flow violates this principle is through introducing excess *friction* to the flow, which causes excessive cognitive load for users. As discussed in Section 3B. Heuristic Analysis, friction refers to “interactions that inhibit people from intuitively and painlessly achieving their goals within a digital interface.” Other experts have noted how some elongated flows create friction, for example in this paper analyzing unnecessary friction in cookie banner consent design: “While two different screens may not seem frictive (increasing friction), this flow is a dark pattern because of the lack of cues within the user interface to show the user which choices they have made, combined with a multi-step process.”<sup>53</sup> There is a similar kind of friction/frictive element present in the Match.com cancellation flows; various expert best practices for cancellation flows have recommended making surveys optional,<sup>54,55</sup> not forcing users to fill out a survey to

---

<sup>53</sup><https://www.gmfus.org/sites/default/files/Sinders%2520-%2520Design%2520and%2520Information%2520Policy%2520Goals.pdf>

<sup>54</sup><https://www.campaignmonitor.com/blog/email-marketing/find-out-reasons-for-unsubscribing-with-a-quick-exit-survey/>

<sup>55</sup> [https://medium.com/@the\\_manifest/9-tips-for-compelling-email-unsubscribe-pages-e2e8cae01c8f](https://medium.com/@the_manifest/9-tips-for-compelling-email-unsubscribe-pages-e2e8cae01c8f)

unsubscribe<sup>56,57</sup> and to create very short, one question surveys.<sup>58,59</sup> Design expert Luke Wroblewski, in his work on forms and similar multi-step processes, notes that “[t]o keep people focused on completing a form, you also should consider which Web site elements help illuminate a clear path to completion and which elements distract from it...[r]emoving interface elements not directly related to completing a form helps keep people on task and removes paths to abandonment.”<sup>60</sup> By inserting 2-3 additional steps on new pages, as well as adding a password authentication step, Match.com increased friction and created barriers to the cancellation process, breaking established cancellation and design flow norms as argued in this section and above.

## II. Dark Patterns in the Cancellation Process

In addition to violating the design principles described above, I found several examples of dark patterns in the cancellation process. In this section I will review each type of dark pattern observed, where I identified it in the process, and when. It is important to note that dark patterns are not

---

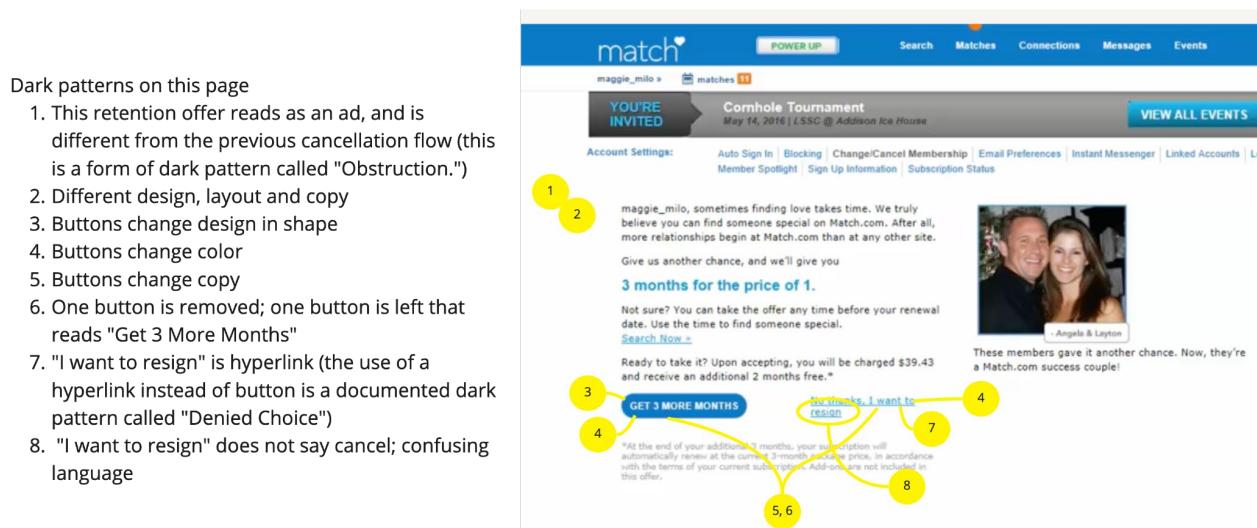
<sup>56</sup> [https://medium.com/@the\\_manifest/9-tips-for-compelling-email-unsubscribe-pages-e2e8cae01c8f](https://medium.com/@the_manifest/9-tips-for-compelling-email-unsubscribe-pages-e2e8cae01c8f)

<sup>57</sup> <https://www.litmus.com/blog/the-dos-and-donts-of-unsubscribes/>

<sup>58</sup> <https://ux.stackexchange.com/questions/17054/should-survey-for-canceling-subscription-be-before-or-after-the-subscription-is>

<sup>59</sup> <https://mailchimp.com/en-gb/help/edit-or-remove-the-unsubscribe-reason-survey/>

<sup>60</sup> Luke Wroblewski. Web Form Design: Filling in the Blanks. Rosenfeld Media: 2008.



**Figure 12: Identification of dark patterns on the 2016 retention offer (Page 3)**

mutually exclusive; a feature (e.g., the survey in the cancellation flow) may utilize more than one dark pattern in its design.

#### a. Obstruction

Obstruction is defined as “Making a process more difficult than it needs to be, with the intent of dissuading certain action(s).”<sup>61</sup> Brignull identifies a specific form of obstruction, the “roach motel,” where “the design makes it very easy for you to get into a certain situation, but then makes it hard for you to get out of it (e.g. a subscription).”<sup>62</sup> Obstruction can also be described as the inappropriate use of friction, as I discussed earlier, where additional steps or features require additional effort by users, increasing cognitive load, time spent, and making it difficult, if not impossible, for some users to complete the process. Obstruction was used throughout the entire

<sup>61</sup> Gray 2018, Mathur 2019.

<sup>62</sup> Brignull, *supra*.

cancellation process, making it longer and more complex than needed, and contributing to user confusion and task abandonment. I observed it at the following points:

- The password authentication requirement at the start of the process. As I discuss in more detail later in this section, this authentication screen appears to have been arbitrarily placed at this point in the flow. Given the comparative lack of risk to the user of a negative impact from an adversary accessing the account for this function as compared to other account functions that were not restricted by authentication, it is difficult to justify why password authentication was necessary at this step. Based on literature from computer security experts and practitioners, the context in which Match.com deploys password authentication bars users from accessing settings on their account that should be readily available.
- The inclusion of survey questions in the process. As I discussed above, peppering survey questions throughout the flow, as well as not indicating that the questions are optional, is a violation of cancellation best practices. A more appropriate point for Match.com to survey its customers would be on the cancellation confirmation page, or in a post-cancellation email, and to make it clearly optional. The inclusion of the survey questions throughout the cancellation flow wastes users' time and increases their cognitive load.
- Inconsistent design throughout the process. As I discussed earlier, the lack of consistency in design throughout the flow makes it difficult for users to understand where they are in the cancellation process and what steps are required in order to complete it. This was particularly apparent on Page 3, the retention offer page.

b. Forced Action

Forced action is the practice of “requiring the user to perform a certain action to access (or continue to access) certain functionality.”<sup>63</sup> What makes an action forced is that there is weak, or zero, justification for the user to take the action; the point is to make the action egregious or laborious enough to disincentivize the user to complete their task. Forced action (as well as obstruction) can enable forced continuity by making it difficult to impossible for users to accomplish the goal of canceling a subscription.

There are multiple examples of forced action in the cancellation process:

- The password authentication page: as discussed earlier and in more detail later in this section, the password authentication step appears arbitrarily placed in relation to other options with access to vulnerable information. Users who did not remember their passwords were prevented from accessing the cancellation flow until they found or reset their passwords. This requirement introduces delay into the process, which can vary by user and the complexity of the password reset process, though among less sophisticated users the process of resetting a password could introduce significant delays and thus prevent them from returning to the cancellation task.
- Inserting survey questions on pages 2 and 4: again, because it was not obvious to users that the survey questions were optional, users were likely to believe that they were required to answer these questions in order to proceed with cancellation. The use of radio buttons as the interaction mechanism reinforces this expectation, as radio buttons are typically presented as an element that must be filled out and selected before moving forward in the

---

<sup>63</sup> Gray 2018.

user flow (a practice that is appropriate for surveys in other contexts where a user **must** fill out each question to get to the end of survey). That nearly every option on page 2 spawned additional questions after selecting an initial response likely led many users to believe they had to answer every question asked of them. This feature also introduces uncertainty—how many new questions will continue to spawn after every answer I select? The dread of possibly spawning more and more questions presents a significant disincentive from continuing the cancellation flow. Again, these multiple questions, instead of one question, breaks the norm of cancellation flows. The open text response field on page 4 of the 2016 version of the flow would also have posed a challenge for users who were inexperienced with such questions or for whom writing responses was a challenge. This field also included a character count (maximum 1000), that some users could misinterpret as a requirement rather than a limit, or as a required number of words rather than characters. Combined with the lack of signaling regarding the number of steps required for users to cancel across all years of the flow I analyzed, the prospect of being forced to answer multiple survey questions across multiple pages would have negatively impacted the experience for many users and led to their abandoning the cancellation flow.

### c. Hidden Information

Match.com frequently hides or fails to disclose relevant information to users. Hidden information is defined as “options or actions relevant to the user but not made immediately or readily accessible.”<sup>64</sup> I observed at least two examples of hidden information:

---

<sup>64</sup> Gray 2018.

- Representing the optional surveys are required: the survey questions presented on Page 2 (Survey S1) and Page 4 (Survey s2) appear required but are actually optional. It is possible for users to click through the pages and cancel without providing any answers. However, this fact is *never stated or signaled* in the cancellation process, nor are users asked if they want to complete a survey. Moreover, statements such as “Before you go, help us make Match.com better” and “Tell us more” would lead some users to believe the survey is compulsory or necessary for cancellation.<sup>65</sup> Later, I compare Match.com’s user flow to Facebook Dating, which presents its survey as optional and bypassable with the inclusion of a “Skip” text button. As mentioned above, design experts have recommended cancellation surveys be optional; users should be notified, either using language or design, that the survey they are filling out is optional, which Match.com failed to do.
- Findability of cancelation process: finding the means to cancel on the website was not a simple task. There appears to be a single pathway to start the process (as outlined in Table 1), which means that failure rates could be high if users did not discover it.<sup>66</sup> While the placement of the gear icon in the universal header adheres to accepted design practices, the use of the term “settings” in the drop-down menu is ambiguous and required exploration by users to encounter the Account Settings option; then, on the Account Settings page, there is no mention of cancellation, but instead the term “Manage Subscription,” which again doesn’t mention cancellation: “Update your membership and/or deactivate your

---

<sup>65</sup> While some users may have felt compelled to click through the process to “submit” the survey, others may have found the use of the “Before you go” language on Page 2 (Survey S1) confusing to the point of suggesting that this page was the “final” cancellation page, and that Page 3 was an optional retention offer that didn’t require clickthrough. Please see Section 4.II.D.2, “Confusing Terminology,” for details. It is important to note that these interpretations are not mutually exclusive; both pose possibility for user confusion.

<sup>66</sup> There is a link within the Canceling help page that appears to deposit the user at the password authentication stage of the cancelation process. I have not observed any other direct links to the process in the materials I reviewed.

profile” in 2019 and earlier, “Manage Account” and then “Manage Subscription” on the 2022 version. Furthermore, the site’s help pages also buried information about membership cancellation; the Manage My Subscription help page doesn’t display the “Canceling” page unless the user clicks on a “See all articles” link, which then displays the full list of articles with “Canceling” at the very bottom. The help page also directs the user to the online process, and does not suggest that users contact an agent except in the context of canceling a free trial.

d. Content Strategy

The software product design process does not just consist of user research, engineering, or user experience (UX) design/graphic design. It also includes content strategy and copywriting. Content strategy and copywriting refer to the actual language and word choices within a software application (app) or product. Words, names and descriptors are as intentional, and planned as the design and coding of the app itself. It is crucial to analyze the language used within the Match.com cancellation flow in order to understand how it contributed to any user confusion, along with the frequency of the language/naming of the particular cancellation copy/content strategy choices and descriptions and the design and interaction patterns changes. All of these language choices (the content strategy and copywriting of the cancellation user flow) contributed to user confusion within the cancellation flow. I must emphasize that while the following section just focuses on content strategy, all of the below examples also coincided with graphical user interface changes, and these changes must be viewed together to understand the wider impact of the dark patterns and confusing elements within Match.com’s cancellation flow. The following paragraphs will focus specifically on the content strategy choices made by Match.com from 2016-2022.

### 1. Inconsistent Language

As mentioned earlier throughout this report, consistency is not only a tenet of good design,<sup>67</sup> it is a practice taught to designers, technologists and product managers. Consistency refers not just to consistent design choices, but also content strategy and copywriting, including use of language, voice, tone, and word choices. Consistency refers to internal consistency for employees and external consistency for users.<sup>68</sup> From 2016-2022, Match.com used inconsistent language throughout the cancellation process, particularly on page 3, the ‘retention offer page’ (Figure 6 for 2016, Figure 10 for 2019, Figure 13 for 2022). As highlighted above, the retention offer page from 2016-2022 changes visual design, UX design (page layout) and content strategy and copywriting design (language choices, tone and voice, etc.). Starting with 2016, the retention offer page shifts in tone and voice from the page previous, switching from third person to first person. Nowhere in the cancellation flow to this point has the “I” voice been used, but between page 2 and page 3 the button choices change from “Back to MyMatch.com” and “Continue Cancellation” to “Get 3 More Months” and the “No thanks, I want to resign” link.

---

<sup>67</sup> Nielsen 1994.

<sup>68</sup> <https://uxdesign.cc/design-principle-consistency-6b0cf7e7339f>

The screenshot shows the Match.com homepage with a prominent blue header bar. On the left is the 'match.' logo. To the right are navigation icons for 'Discover' (with a house icon), 'Search' (with a magnifying glass icon), 'Likes' (with a heart icon), 'Matches' (with a person icon), and 'Events' (with a gift icon). Further to the right are 'POWER UP' and account settings icons. A large black banner at the top features a profile picture placeholder and the text 'Limited-time only! Get 4x more views for FREE' with a question mark icon, followed by a 'START NOW' button.

Below the banner, a message from Tyler encourages users to find love on Match.com. It includes a small photo of a couple and the caption '- Angela & Layton'. Another message below it says, 'These members gave it another chance. Now, they're a Match.com success couple!'.

A central text block discusses a 3-month standard subscription offer for \$45.99, noting automatic renewal and the non-discounted price of \$95.97 if canceled. It includes a 'Learn More' link and two buttons: 'GET 3 MORE MONTHS' and 'CONTINUE CANCELLATION'.

At the bottom, there's a note about taking the offer before the renewal date, a 'Search Now' link, and a copyright notice: '© Copyright 2022 Match Group, LLC wda3-002f-s-'.

**About Match**  
Accessibility Help  
Terms of Use  
Your Privacy  
Ad Choices  
Careers  
Cookie Policy

**Online Dating Safety Tips**  
Dating Articles and Advice  
Success Stories

**Help/FAQs**  
Contact Us  
Site Map  
Match International  
Media Room

**Mobile**  
Gift Subscriptions

**Advertise on Match**

Social media icons for YouTube, Facebook, Twitter, Instagram, and Pinterest are also present.

Figure 13: Retention Offer from 2022, Match Cancellation Process\_10-12-2022.wmv

The 2019 process features two different retention offer pages with one flow in 2019, captured from F01-MG-0028904.webm, that shows the retention offer page uses “Continue” instead of “Continue Cancellation.” Previous pages from F01-MG-0028904.webm use “Continue Cancellation,” with the retention offer page switching to “Continue” with previous and subsequent pages switching back to “Continue Cancellation.” However, the other flow from 2019, captured from MATCHFTC672309.mp4, and documented in 2022, show the retention offer page, has changed to include “Continue Cancellation” as a button, which is consistent, but the rest of the copy, design

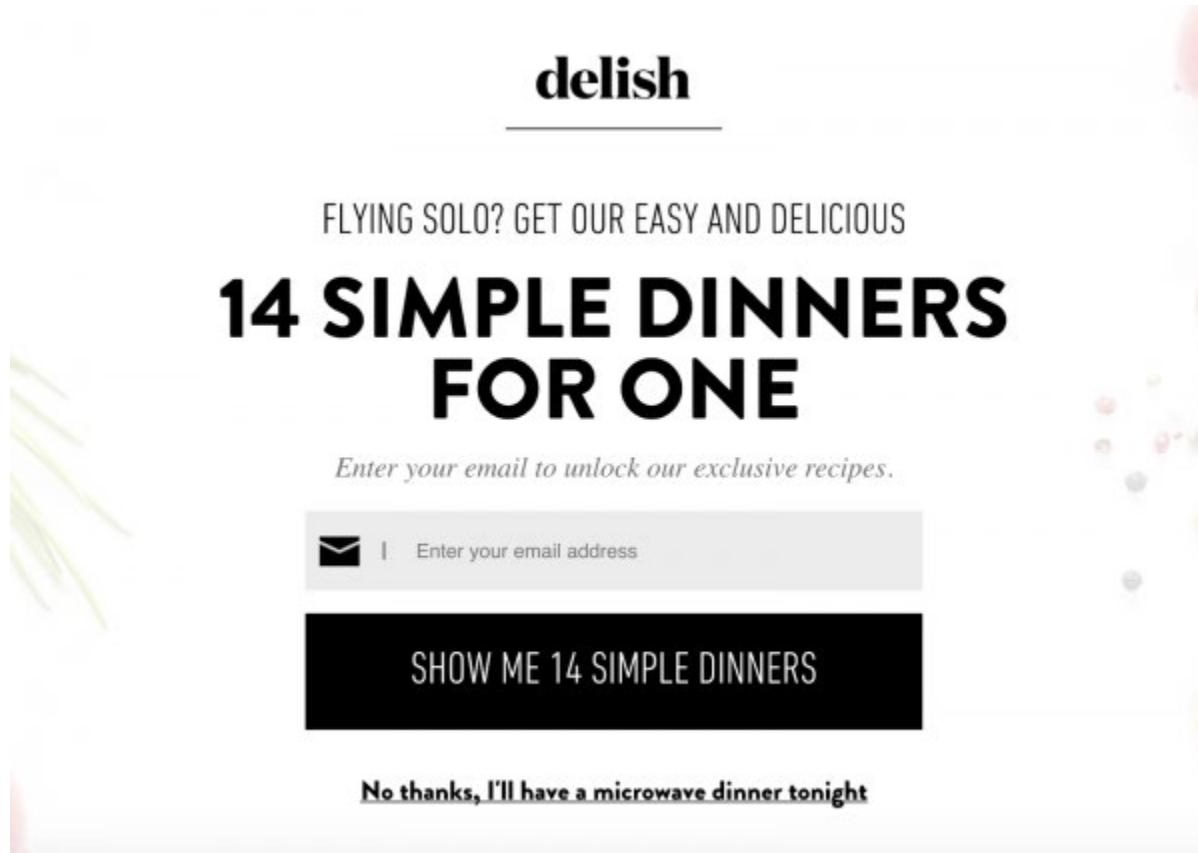
and images on the retention offer page is still similar, if not identical, to 2016, which again demonstrates a discontinuity in tone from the preceding and following pages. The copy on the retention offer page is similar to an ad, or coupon, and while it does mention cancellation, its tone shifts from survey style language to friendly ad copy, and then back to the survey tone on the following page.

Shifts in tone are forms of inconsistency; certain parts of a website, such as the landing page, might use a more personalized or friendly voice for new and returning users, while other parts of a website, such as a cancellation flow or a sign up flow, might use more general, and straightforward language. Specifically, different tones can signal different actions, or different parts of a website or product. Shifting tones within a specific flow, such as signing up or canceling, breaks ‘consistency’ and leads to confusion; for example, did the user accidentally click somewhere on the navigation and exit the flow they were in, or did they accidentally click on an ad? Consistent content strategy helps guide, ground, and place a user in a process, particularly as they are actively navigating a process, such as changing a feature or setting, or removing or deleting content or subscriptions. Relatedly, the kind of tone and language used by the retention offer page, which is different from the tone and language used in the rest of the cancellation flow, is an example of a dark pattern as ‘confirmshaming.’ Confirmshaming is defined as: “the act of guiltling the user into opting in to something. The option to decline is worded in such a way as to shame the user into compliance. The most common use is to get a user to sign up for a mailing list, and it is often found in exit intent modals and other popups.”<sup>69</sup> Other experts describe ‘confirmshaming’ as “using

---

<sup>69</sup> <https://www.deceptive.design/types/confirmshaming>

language and emotion (shame) to steer users away from making a certain choice.”<sup>70</sup> For example, delish.com, an online food and lifestyle service, offers users to sign up for their email list; the option to decline (“No thanks, I’ll have a microwave dinner tonight”) is framed as inferior and undesirable compared to the option to accept (“Show Me 14 Simple Dinners”).<sup>71</sup>



**Figure 14: Delish.com using Partial Language to Discourage “Opt-Outs”**

Based on Figure 6 (Page 3 of the 2016 Cancellation Flow), Match.com also used a dark pattern called “confirmshaming” in their retention offer: “[User Name], sometimes finding love takes time. We truly believe you can find someone special on Match.com. After all, more relationships

<sup>70</sup> <https://arxiv.org/pdf/1907.07032.pdf>

<sup>71</sup> Eric Shroeder, “UX Dark Patterns: Manipulinks and Confirmshaming.” *UX Booth*. (June 4th, 2019). <https://www.uxbooth.com/articles/ux-dark-patterns-manipulinks-and-confirmshaming/>

begin at Match.com than any other website. Give us another shot and we'll give you \_\_\_\_\_ off your renewal.”<sup>72</sup> Additionally, an image of a couple is shown with the caption: “These members gave it another chance. Now they are a Match.com success couple!” The presentation of a ‘successful couple’ is questionable as a user may be canceling their subscription for any number of reasons, including having established a ‘successful’ relationship since starting Match.com. The usage of the confirmshaming along with the abrupt tonal shift from the rest of the cancellation flow, only heightens the inconsistent language which in turn can add to user confusion. Match.com’s own employees also appear to have found similarly; in document MATCHFTC320168\_image.pdf, page 1 notes that employees described the 2016 flow’s verbiage as ‘inconsistent’ and the retention offer as ‘misleading.’

## 2. Confusing Terminology

As mentioned above, Match.com repeatedly used inconsistent language and tone across the cancellation process. But the company also used confusing terms (copy) throughout the cancellation process as well. For example, in 2016, on the retention offer page, Match.com uses the phrase “No thanks, I want to resign.” Prior to this page, the cancellation flow has not used ‘resign’ at all, but instead has used ‘cancel’, ‘cancellation’ and ‘canceling.’ Match.com employees have referred to the cancellation process as ‘resignation process’ and have highlighted the flow itself is confusing to users.<sup>73</sup> The use of the term “resignation” in the retention offer leads to further confusion for users, as it has never been used in the cancellation process until this point, and is not used again on subsequent pages. A review of screenshots of the Match.com help pages provided

---

<sup>72</sup> MATCHFTC761906.mp4; Please note that the renewal offer is ‘3 months for the price of one’ instead of a percentage off. All of the other documentation mentions 3 months for the price of one or 50% in their retention offer.

<sup>73</sup> MATCHFTC519412.pdf

to me by the FTC also does not include the term “resignation” throughout. While resignation is what Match.com internally refers to as ‘cancellation’, this is new language for users, and the word choice, coupled with the shift in tone and use of first person “I”, adds to further confusion.

As mentioned above, in one version of the 2019 flow,<sup>74</sup> Match.com’s retention offer uses “Continue” instead of “Continue Cancellation.” In this instance, ‘Continue’ creates ambiguity: what, exactly, is being continued? Does clicking ‘Continue’ kickstart the retention offer and not cancellation, or does ‘Continue’ continue the cancellation process? By switching the buttons’ naming conventions, along with the changes on this specific retention offer page, it creates confusion as to what task is being continued.

Another confusing example involves Page 2 of the cancellation flow (Figure 5), the first survey page. The headline on this page, “Before you go, help us make Match.com better” may have misled some users to believe that this was the final step in the cancellation process. The use of the term “before you go” makes it sound as if the user has already completed the process, and that the survey questions on this page were in fact a post-cancellation survey. Because this page was followed by the retention page, which appeared more like an ad than a clear step in the cancellation process, some users may have believed upon arriving on Page 3 that the cancellation process was complete, and dropped out at that point, when in fact in order to complete the cancellation they were compelled to click through Page 3.

---

<sup>74</sup> F01-MG-0028904.webm

### III. The Password Authentication Screen

In this section, I review the use of the password authentication screen in depth. As discussed above, the password authentication screen was used as: a source of increased friction to make cancellation more difficult to access; to obstruct users from accomplishing the cancellation task; and as a form of forced action, by requiring users to complete a task unnecessary or unconnected from their primary goal (subscription cancellation). But because password authentication does have a critical and appropriate use, in this section I will review the appropriate justification for password authentication, and provide an analysis of what made Match’s use of it in this flow *inappropriate*.

#### a. Password Friction: Balancing Users’ Security and Ease of Access

A persistent problem in HCI and user studies is the counterbalance between privacy, security, and ease of use. This is most evident in the provision of password checks: sign-in or verification points at various points in the user flow. The contextual placement of these log-in points can cause undue friction, which leads to site hopping, reduced conversions, and task abandonment.<sup>75</sup> Password checks, failed attempts to reset passwords and account lockouts cause users to forgo online purchases.<sup>76</sup> In a study where over half of participants relied on social logins (sign-ins via connected social media platforms such as Facebook), half of participants were prone to abandon a website if asked to provide a password.<sup>77</sup> The lack of ease in these interactions can compromise the password check’s original goal. In the same study, 12% of participants produced a “variation of an old password” and 2% defaulted to their previous password; 48% participants admitted they

---

<sup>75</sup> Young, *supra*.

<sup>76</sup> “The Current State of Checkout UX-18 Common Pitfalls & Best Practices,” Baymard Institute. <https://baymard.com/blog/current-state-of-checkout-ux>

<sup>77</sup> “Are Password Resets Costing Your Company?” Beyond Identity Blog, December 17, 2021. <https://www.beyondidentity.com/blog/password-resets-and-the-consumer-journey>

were very likely to abandon the site if they were explicitly told they could not use prior passwords. Evidently, password friction stifles users, yielding inferior or similar passwords, or causing user drop-off altogether.

The password authentication requirement for Match.com users attempting to manage their subscriptions may be described as a “pain point:” a hurdle or obstacle that decreases the quality of customer experience.<sup>78</sup> It is particularly obstructive because it appears that Match.com users could remain signed-in to their accounts for extended periods of time without receiving a password prompt, as well as access other account settings that posed a greater risk directly to the user if they were compromised, such as editing one’s name, email address, and password.<sup>79</sup> It appears the greatest risk posed by accessing the “Change/Cancel Membership” setting is to the company, who may experience higher cancellation levels through ease of access. This obstruction qualifies as an *interaction-level* pain point, in which the user experiences navigation difficulty regarding a product or service; as well as a *relationship-level* pain point, in which the user questions the quality of service by the service provider.<sup>80</sup> Pain points can deter users from task completion by increasing their cognitive load. Several financial institutions have set guidelines to mitigate customer dissatisfaction with online subscription practices. For example, major card companies mandate that online merchants notify customers upgrading their free trials to paid subscriptions prior to

---

<sup>78</sup> Sarah Gibbons, Three Levels of Pain Points in Customer Experience. Nielsen Norman Group. (May 16, 2021). <https://www.nngroup.com/articles/pain-points/>

<sup>79</sup> Based upon evidence provided to me, it appears that when a user is signed into her account, the only point at which she would receive the password authentication screen was during the cancellation flow. I do not have knowledge of how long a user could remain signed in to their Match.com account before being asked to reauthenticate. However, it is common for many websites to allow users to remain signed-in for extended periods of time given how burdensome users can find password authentication.

<sup>80</sup> Gibbons, *supra*; Achonwa Alvan, What are pain points in design? Eduative.

<https://www.educative.io/answers/what-are-pain-points-in-design>

charges, as well as provide “clearer instructions about how to cancel.”<sup>81</sup> Additionally, Visa prescribes that customers “must be able to cancel their subscription online with the merchant, without needing to contact the merchant through another channel (e.g. a phone call).”<sup>82</sup>

These pain points are validated by work communications between Match.com employees. As of February 24, 2016, Match.com’s staff noted: “Also, the majority of members drop out when asked to re-enter their password so I’m not sure if they think they canceled, or if they were just clicking the button for the heck of it.”<sup>83</sup> As early as June 05, 2013, Match.com staff indicated:

“We need to take a look at our resignation flow...Currently the flow is very convoluted and confusing. We get a lot of customer care complaints about it. I want to see if there’s a way to clean up the flow, yet optimize it so we can try to save as many people from resigning as possible. If we can plug the hole where people are leaving the site, it can help with our PMC goals.”<sup>84</sup>

We have identified relevant security design principles and practices to evaluate the ease of Match.com’s cancellation. According to the *principle of psychological acceptability*: “security mechanisms should not make the resource more difficult to access than if the security mechanisms were not present.”<sup>85</sup> Desired resources should not be barred by security checks, and if they are, the

---

<sup>81</sup> Alex Glaser, Customers fight surprise charges as online subscription surge. NBC News, December 23, 2020. <https://www.nbcnews.com/business/business-news/customers-fight-surprise-charges-online-subscriptions-surge-n1252149>

<sup>82</sup> Visa Business News, “Reminder: Updated Policy for Subscription Merchants Offering Free Trials or Introductory Promotions.” <https://usa.visa.com/dam/VCOM/global/support-legal/documents/subscription-policy-vbn-visa-public.pdf> (September 26, 2019).

<sup>83</sup> MATCHFTC320168\_image.pdf.

<sup>84</sup> MATCHFTC417535.pdf.

<sup>85</sup> Matt Bishop, *Computer Security: Art and Science*. Chapter 13: Design Principles, Page 348. Boston, MA: Addison-Wesley, 2003.

principle indicates that the burden imposed onto users in passing these checks must be *minimal* and *reasonable*. From the evidence aforementioned, I question whether the security check at the point of membership cancellation is reasonable for users, given Match.com allows users to remain logged-in for extended periods of time. In addition, I challenge the placement of the password screen in contrast to other account settings.

In the evidence reviewed, I did not observe the password screen invoked at any other point in any of the videos during various iterations of website usage.<sup>86</sup> In documents depicting the “Account Settings” from 2016 and 2019, the “Change/Cancel Membership” setting is the only one requiring a password—although several other settings could feasibly put the user’s account security and integrity at greater risk from an adversary having unauthorized access to a legitimate account. Specifically, in the video Match Cancellation Process\_10-12-2022.wmv, the user repeatedly clicks “back to home” and then proceeds through the flow clicking on multiple settings, then returns to the “Change/Cancel Membership” setting and is not required to authenticate again. This breaks the flow Match.com has introduced with the requirement of password authentication. With this break in the security pattern, it appears that the use of the password by Match.com is not a security measure, but one designed to create friction; if this was a choice motivated by security concerns, why does the site not require the user to sign in repeatedly each time they selected “Change/Cancel Membership”? To be clear, I am not recommending this behavior, but instead highlighting an inconsistency in the design flow. If this authentication step were truly a security feature, it would be consistent in terms of when the user has to sign in, such as upon returning to the home page. But instead, the password is not consistently required, and thus is a questionable security measure.

---

<sup>86</sup> I assume in all the videos I reviewed that the user had already logged into the website at some point prior to the recording session.

I conclude that the presentation of the password screen during the cancellation process is arbitrarily placed compared to other account settings. Match.com's cancellation flow, in regard to its password friction, does not satisfy the *principle of psychological acceptability*. The placement of the password screen fails to be reasonable or minimal; obstructs user access unnecessarily; and deters legitimate users from resources on their account that should be readily accessible.

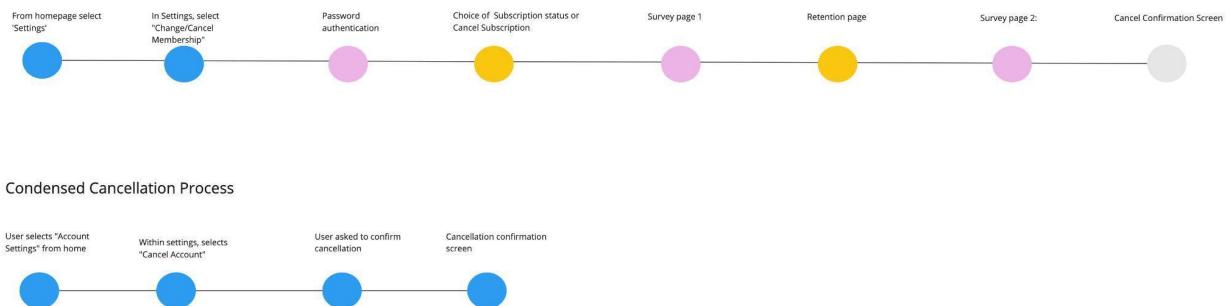
## 5. Conclusion: Putting the Heuristic Analysis into Perspective

This analysis demonstrates that the Match.com cancellation flow was neither easy to find nor easy to use throughout the entire timespan of my analysis. I mapped the evolution of the cancellation flow from the years 2016, 2019, and 2022. I marked introductions and changes to password screens, buttons, links, and copywriting. Based on this evolution, I concluded the following:

1. The cancellation flow fails to make visible what stage in the process users are in (see “Visibility of System Status”).
2. The process suffers from inconsistent design, terminology and language, thus confusing users (see “Consistency and Standards”).
3. Extraneous steps slow down the cancellation process. Password screens, surveys, and retention offers introduce unnecessary friction into the user journey (see “Aesthetic and Minimalist Design”).

While Match.com can, at their discretion, implement password checks, offer retention deals, and survey users, it is the *placement* of these items within the cancellation process that makes it difficult for users to complete. There are better placements for these items that do not obstruct the cancellation process.

Match.com Cancellation Process 2022 from Match Cancellation Process\_10-12-2022.wmv



**Figure 15: A comparison of the existing cancellation process as compared to a condensed process**

The inclusion of these extraneous steps increased the length of the flow by at least four steps, as Figure 15 demonstrates above. As a comparison, I created a condensed cancellation process consisting of the following steps:

1. From home page, select Account Settings;
2. Within the Account Settings, select “Cancel Account”;
3. Confirm cancellation;
4. Receive cancellation confirmation.

In this section, I will conclude my analysis first by drawing upon evidence provided to me by the FTC of internal discussions by Match.com employees about the cancellation flow, which can provide context for the problems I identified. Second, I will briefly talk about the larger landscape of concerns with dark patterns in subscription cancellations, focusing on practices by Match.com competitors, and then reviewing the larger policy context in which dark patterns are a focus of subscription cancellations.

## A. Evidence from Company Documents

After concluding my heuristic analysis of the website, I reviewed internal company documents provided to me by the FTC. I found that the documents supported the conclusions I have drawn in this report. Multiple documents validated the existence of customer complaints regarding Match.com's cancellation flow. There is evidence in the documents I reviewed that Match.com employees were aware that the cancellation process is problematic, with one employee noting in 2016 that "honestly it's been the same complaint for the past decade that I've been with Match ... it takes up to 7 or 8 clicks to complete the flow to turn off AR . . . even if you can figure out how to do it. Also, the majority of members drop out when asked to re-enter their password."<sup>87</sup> One exchange with customer support personnel, from 2015, highlights user abandonment with the retention page in particular: "The cancel/resign flow is like 5 steps. Many times the users think once they click "resign" that they are done. They're not, they have to click through the nag screens. Michele complained about this for years, but Product would not reduce the resign steps. It's not a bug. It's a feature."<sup>88</sup>

Another exchange from 2016 highlights that employees understood that "customers complain that they cancel and we still auto renew them," suggesting the survey was problematic, that there was confusing language, and that "there is no doubt that the resignation flow is extraneous and potentially confusing."<sup>89</sup> A technical resolutions supervisor, also in 2016, discussed in a long email memo that as of May they had already had over 1K complaints, and "[w]e believe we can make

---

<sup>87</sup> MATCH320168\_image.pdf

<sup>88</sup> MATCHFTC519412.pdf

<sup>89</sup> MATCH543542.pdf

this process easier for our members who are already wanting to cancel (they've made it to the flow) but get stuck on survey pages, retention offers, etc and believe they canceled . . . by shortening the flow, we could make sure members who are wanting to cancel and who are already in the cancel the flow are able to complete cancellation successfully.”<sup>90</sup> In another, employees offered the following: “I want to see if there’s a way to clean up the flow, yet optimize it so we can try to save as many people from resigning as possible. If we can plug the hole where people are leaving the site, it can help with our PMC goals.”<sup>91</sup>

One aspect of the process that the internal documents illuminate is the arbitrariness of the password authentication step. Despite wide-ranging conversations about issues with the cancellation process, there is no mention of a security issue requiring password authentication. In fact, one presentation discussing the cancellation process documented the steps with this note: “Enter Password (Why?)”.<sup>92</sup> One staff member indicated that “the majority of members drop out when asked to re-enter their password so I’m not sure if they think they canceled, or if they were just clicking the button for the heck of it.”<sup>93</sup> From this communication, it is evident that the password screen caused users to flee the cancellation procedure without a clear understanding of their cancellation status. When reviewing Match.com’s *proposed* solutions to this problem, I found that one solution did not require password entry at all.<sup>94</sup> Instead, it notifies users of the 6-month subscription renewal date and chargeable amount, and provides three checkbox options: “Turn off automatic billing,”

---

<sup>90</sup> MATCH464887.pdf

<sup>91</sup> MATCHFTC417535.pdf, *supra*.

<sup>92</sup> MATCHFTC543666.pdf

<sup>93</sup> MATCHFTC320168\_image.pdf, *supra*.

<sup>94</sup> MATCH491446.pdf

“Hide profile,” and “Permanently delete account.” A blue, rounded “Save Changes” button and a “Help” link accompany the three options. The proposed solution is followed by a caption:

“Proposed cancellation flow does not require re-entry of password, and provides simple and descriptive options for the member to choose from. Sometimes members just want to prevent future billing, and sometimes they want their account “removed” entirely. Once the “save changes” button is pressed, the member will see a cancel confirmation page and have the option to complete a survey.”

The proposed solution is clearer and more concise than the eight page/step cancellation flow. The most profound takeaway is that a cancellation flow without password authentication had the potential to simplify the customer journey. Moreover, this pitch pushes the survey form to *after* the cancel confirmation page and makes it *optional*. This solution was not implemented in the documents I received.

In addition to the password authentication issue, there are several documents proposing changes to the overall process to address customer dissatisfaction. The cost of hidden information becomes clear; in MATCHFTC543666, a PowerPoint presentation, Slide 2 notes that “We spend over \$1M per year to handle related Care contacts,” and that “Over half of member help searches are related to just 10 of our 400 FAQs. Guess what they’re related to—cancellations.”<sup>95</sup> Another email exchange from 2014 appears to document cancellation flow abandonment from the password page at a discrete moment in time (documenting a 80% click-through rate to the password authentication

---

<sup>95</sup> MATCHFTC543666.pdf

page, and then a dramatic 6% click-through rate to following page, which appeared to be the retention offer at this stage in time, a drop of approximately 94% from the first page where the calculations were made).<sup>96</sup> Proposed changes, in addition to those described above in relation to password authentication, included shortening the overall process down to seven steps,<sup>97</sup> and moving the survey to a post-cancelation step.<sup>98</sup>

Finally, it is important to note that while this evidence demonstrates that some employees quantified the cost to the company of customers' need to contact customer service to cancel their accounts, their accounting does not capture the costs accrued by the customer in excess of any additional direct costs from uncancelled subscriptions, such as time spent trying to find another means to cancel, time invested in contacting and working with an agent to execute the cancellation process, and any frustration experienced from this process. These are harms attached to the dark patterns we described in Section 4.B.II.

## B. Competitor Practices

For comparison purposes, I conducted a heuristic analysis of two competitor websites that are not owned by Match.com's parent company: Facebook Dating and Coffee Meets Bagel, and their cancellation processes.<sup>99</sup> Below, I have attached a visualization of the cancellation process. Yellow represents the element of dark pattern(s) and pink represents frictions. Each step starts after the

---

<sup>96</sup> MATCHFTC312903.pdf

<sup>97</sup> Id.

<sup>98</sup> Id., MATCHFTC491442.

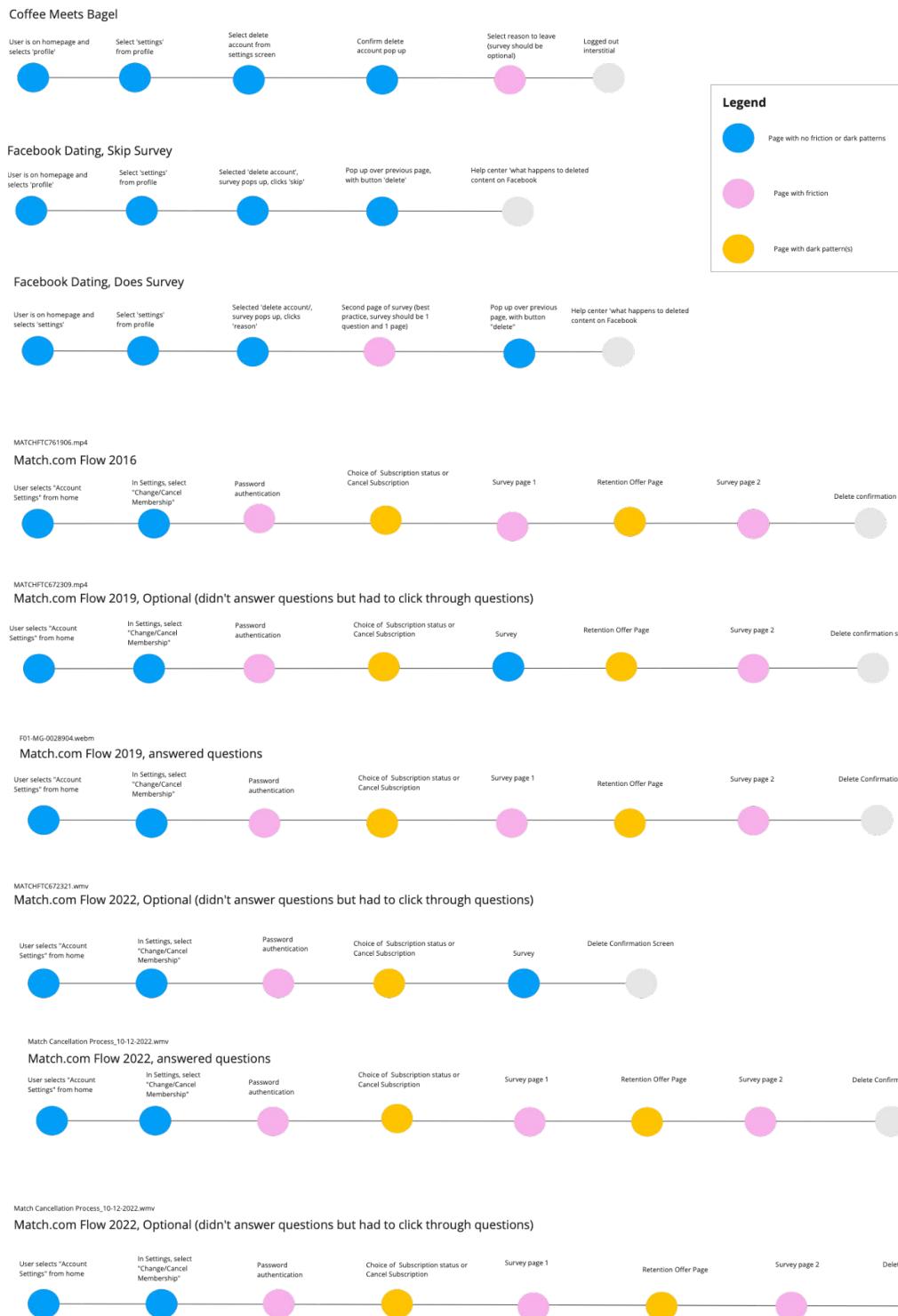
<sup>99</sup> Note that these reviews were conducted on the mobile versions of these services.

user has already found their settings (omitting the click for the user to get to their settings page). Coffee Meets Bagel had four steps with one step being friction-filled; a survey that was not marked optional. Facebook Dating has two different flows, one with a user able to ‘skip’ a survey, and one where a user completes out the survey. The Facebook ‘skip’ survey flow has three steps and no friction, but the flow with survey has four steps, with two survey pages.

However, the shortest version of the Match.com cancellation flow is from 2022,<sup>100</sup> which has four steps and apparently no retention offer page if the user selects the survey choice indicating that they have met someone. All other Match.com choices yield six steps within the cancellation, meaning the shortest Match.com flow is still the longest option of the competitors analyzed. Additionally, Match.com was the only product that had dark patterns and frictions in their user cancellation flows, in comparison to Facebook Dating and Coffee Meets Bagel. Relatedly, Match.com had each of the frictions from all of the Facebook Dating and Coffee Meets Bagel flows. Match.com’s flow had more friction and more dark patterns, than the two other competitors analyzed for this report.

---

<sup>100</sup> MATCHFTC672321.wmv



**Figure 16: Comparison of cancellation flows between Match.com, Coffee Meets Bagel, and Facebook Dating**

### C. Conclusion

In conclusion, based on the evidence I have reviewed, I find the Match.com cancellation process neither easy to find nor easy to use, but instead plagued by noncompliance with design heuristics and dark patterns. Furthermore, the evidence I have reviewed demonstrates that the company was aware of these problems for potentially for a decade-plus, and yet chose not to address them. The result of these problems was to make it difficult, if not impossible, for many Match.com users to cancel their subscriptions using the online cancellation process, with many believing that they had canceled their subscriptions when in fact, they had not, thus accruing additional charges. Based on the documents I reviewed, it appears that many customers had to find other routes to contact the company outside the online cancellation process, but that those methods were also difficult to locate, and required additional and disproportionate investments of time by customers.

The analysis and opinions contained in this report are based on information available as of the date of the report. I reserve the right to supplement or amend this report should any additional information become available including, but not limited to, any expert reports submitted on behalf of defendants, deposition transcripts, and other information unavailable as of the date of this report.

I understand that this report may be used in a law enforcement proceeding. Pursuant to 28 USC Section 1746, I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.

A handwritten signature in black ink that reads "Jennifer King, Ph.D". The signature is fluid and cursive, with "Jennifer" and "King" connected by a single stroke, and "Ph.D" written in a smaller, more formal script.

/S/

Jennifer King, Ph.D

January 13, 2023

Berkeley, California

# Appendix I: Dr. King's CV

## Jennifer King, Ph.D, MIMS

[jen@jenking.net](mailto:jen@jenking.net)

[www.jenking.net](http://www.jenking.net)

415-990-8227

### Research Summary

I am an information scientist whose research sits at the intersection of human-computer interaction and public policy. My specific research focus is information privacy—how the public makes choices about their personal data in the context of their relationships with institutional actors, how the design of technology impacts these decisions, and how legal and policy infrastructures impact these choices. I use both quantitative and qualitative methods to examine these issues, focusing both on the role of interface design as well as social structure on individual decision-making.

### Present Role

**Privacy and Data Policy Fellow, Stanford Institute for Human Centered Artificial Intelligence** Jan. 2021-present  
At HAI I conduct information privacy research with a specific focus on artificial intelligence, as well as work with Professors Sarah Billington and James Landay on a research project examining the impact of sensors used in workplace environments to promote health and well-being. In this role I also engage with and advise policymakers, legislators, and governmental entities on issues related to information privacy, as well as collaborate with HAI colleagues on promoting interdisciplinary policy-focused research at Stanford. Co-instructed the [National Research Cloud policy practicum](#) with Professor Dan Ho and HAI Director of Policy Russell Wald in winter/spring 2021.

### Education

#### **University of California, Berkeley School of Information**

#### **Ph.D, Information Management and Systems**

2009 – May

2018

- My dissertation, “Privacy and Social Exchange Theory,” used a social relational framework to explore consumer motivations for disclosing personal information to companies. I employed both qualitative and experimental methods for this research. It was selected as the runner up in the Information Schools (I-Schools) Organization’s 2019 Best Dissertation Award. Dissertation advisors: Deirdre Mulligan, Coye Cheshire, Steve Weber, and David Wagner.
- Focus areas: human-computer interaction, social computing, and information law and policy.
- Research funded by grants from the Center for Long Term Cybersecurity (inaugural grantee), the National Science Foundation through TRUST (Team for Research Through Ubiquitous Secure Technology) and the I3P (Institute for Information Infrastructure Protection).
- Co-director of the student led Center for Technology, Society & Policy for the 2016-2017 academic year. CTSP funds fellows and projects, organizes events, and hosts speakers supporting our four focus areas: engineering ethics, digital citizenship, evaluating technology policy, and supporting future technologists.

#### **University of California, Berkeley, Masters of Information Management and Systems (MIMS)**

2006

#### **University of California, Irvine, B.A., Political Science (Honors) and Sociology**

1994

### Professional and Research Experience

**Director of Consumer Privacy, Center for Internet and Society, Stanford Law School** April 2018-Dec. 2020  
In this role I conducted privacy-focused research in the public interest on topics such as genetic privacy, the Internet of Things, notice and consent, and artificial intelligence. I actively participated in the management of the Center, including strategic planning for research and fundraising. I also engaged with and advised policymakers, legislators, and governmental entities on issues related to information privacy.

**Co-Director, Center for Technology, Society & Policy, UC Berkeley** Aug. 2016 – July 2017  
Co-director of the student led CTSP for the 2016-2017 academic year. CTSP funds fellows and projects, organizes events, and hosts speakers supporting our four focus areas: engineering ethics, digital citizenship, evaluating technology policy, and supporting future technologists.

**Contract Litigation Consultant/Expert Witness** 2010 –  
present  
I provided expert services to clients (Federal Trade Commission, Federal Reserve Board, State of Washington, City of Santa Monica, City of Santa Cruz, and others) focusing on online disclosures, negative option continuity programs, online credibility, deception, and general website usability issues.  
Major Cases include:

- Testifying Expert, FTC vs. Amazon (2:14-cv-01038-JCC). I completed an expert report, rebuttal report, and was deposed. My expert report provided a heuristic analysis of the in-app purchase process as well as an analysis of thousands of customer complaints. The case was decided on summary judgment in favor of the FTC, finding Amazon liable for unauthorized in-app purchases by children on the Kindle Fire tablet.
- Testifying Expert, FTC vs. Commerce Planet (8:09-cv-01324-CJC(RNBx)). I completed an expert report, rebuttal report, was deposed, and testified at trial. The substance of my report was a heuristic evaluation of a portion of the Commerce Planet website to determine the clarity and conspicuousness of negative option marketing disclosures to consumers. The case resulted in a permanent injunction, restitution, and disgorgement against the defendant for deceptive and unfair practices violating Section 5(a) of the FTC Act.

**Research Specialist, Samuelson Law, Technology, & Public Policy Clinic, U.C.B. Law, Berkeley, CA** 2007-2009  
● Utilized information science, social sciences, and experience in technology development and human-computer interaction to perform empirical research and develop policy recommendations focused on privacy issues with Internet technologies, ubiquitous computing and sensor networks, including RFID and video surveillance systems.

**Paranoid Yahoo!, Yahoo! Data Security (Paranoid) Team (contract), Sunnyvale, CA** 2006  
● The Paranoid team worked to protect the privacy and integrity of Yahoo! user data worldwide.  
● Developed strategic initiatives to combat password “phishing” threats for Yahoo! Users.  
● Evaluated internal and external applications for data privacy and integrity threats, developing applications and internal policy.

**Researcher, Electronic Frontier Foundation, San Francisco, CA**  
2005  
● Investigated privacy policies governing user data on major search engines and privacy issues related to radio frequency identification (RFID) for EFF, a non-profit group that advocates for Internet civil rights, privacy, and free speech.

**Customer Trust Product Manager, Yahoo! Community Services, Sunnyvale, CA** 3.03 – 7.04  
● The Customer Trust Manager role was a new position created on the Product Management team to combat abuse and illegal uses of Community properties, and to be an advocate for Yahoo! customers. This was one of the first Trust & Safety roles in the industry.  
● Developed strategic and tactical Community anti-abuse initiatives, and evangelized these efforts across the company, working closely with legal, policy, data security, and various product teams.  
● Focused on investigating deviant and anti-social users of Community products, and performed an extensive qualitative and quantitative analysis of a criminal user population to create policies and build software tools for

content moderation in order to curb their usage of the service; this effort decreased their content contributions to Yahoo! by over 80%.

<b>Associate Product Manager, Yahoo! Personals, Sunnyvale, CA</b>	9.02 –
3.03	
● Managed feature development from conception to completion, working with marketing, interaction and visual design, web development, engineering, and quality assurance teams.	
● Drove development of front-end and back-end features, including video greetings, direct marketing programs, and internal customer care tools.	
● Led the creation of anti-fraud initiatives, increasing customer retention and recapturing over \$4M in annual revenue.	
<b>Senior Producer, Kaplan Tech West, a subsidiary of Kaplan, Inc. Oakland, CA</b>	10.00 – 9.02
● Kaplan Inc. is an international educational services company. Kaplan Tech West was Kaplan's primary software development team, charged with building an online distance-learning platform.	
● Oversaw end-to-end development of the learning platform's XML-based content authoring system, including requirements gathering, usability testing and evaluation, interface design, and user training.	
● Performed a detailed semantic analysis of Kaplan instructional content, and worked with data architects to refine models for encoding Kaplan content in XML.	
<b>Producer, Desktop.com, San Francisco, CA</b>	7.00 – 10.00
● Created new applications for Desktop's Internet-based computer desktop product, performed market research and analysis of key competitors, and designed interface improvements to existing applications.	
<b>Assistant Producer, Productopia.com, San Francisco, CA</b>	5.99
– 7.00	

### **Peer Reviewed Journal and Conference Papers**

Mulligan, D.K., Regan, P.M. and **King, J.** (2020), The Fertile Dark Matter of Privacy takes on the Dark Patterns of Surveillance. *J. Consum. Psychol.*, 30: 767-773. <https://doi-org/10.1002/jcpy.1190>

**Jennifer King.** 2019. "Becoming Part of Something Bigger": Direct to Consumer Genetic Testing, Privacy, and Personal Disclosure. *Proc. ACM Hum.-Comput. Interact.* 3, CSCW, Article 158 (November 2019), 33 pages. <https://doi.org/10.1145/3359260>

Christopher Thompson, Maritza Johnson, Serge Egelman, David Wagner, and **Jennifer King**. "When It's Better to Ask Forgiveness than Get Permission: Attribution Mechanisms for Smartphone Resources." Presented at the Symposium on Usable Privacy and Security, July 2013. Newcastle, UK.

**Jennifer King**, Airi Lampinen, and Alex Smolen. "Privacy: Is There An App For That?" Presented at the Symposium on Usable Privacy and Security, July 2011. Pittsburgh, PA.

**King, Jennifer** and Selcugoklu, Aylin. "Where's the Beep? User Misunderstandings of RFID." In Proceedings of 2011 IEEE International Conference on RFID.

M. Meingast, **J. King**, D. Mulligan. "Embedded RFID and Everyday Things: A Case Study of the Security and Privacy Risks of the U.S. e-Passport." In Proceedings of IEEE International Conference on RFID, March 2007.

M. Meingast, **J. King**, D. Mulligan. "Security and Privacy Risks of Embedded RFID in Everyday Things: the e-Passport and Beyond," *Journal of Communications*, 2(7), 2007.

### **Law Review Articles and Refereed Workshop Publications**

**Jennifer King** and Adriana Stephan. Regulating Dark Patterns in Practice – Applying the California Privacy Rights Act. *Georgetown Technology and Law Review*. 5 Geo. L. Tech. Rev. 251 (2021).

**Jennifer King**, Richmond Wong, Rena Coen, Jael Makagon, and Andreas Katsanevas. “This All Seemed Fairly Normal To Me” □ The Absence of Effect of Privacy Policy Links on Invasive Personal Disclosure. Presented at the Privacy Law Scholars Conference (invitation only), May 2019, Berkeley, CA.

**Jennifer King**, “Privacy, Disclosure, and Social Exchange Theory.” UC Berkeley dissertation, filed May 2018. A draft of this work was presented at the Privacy Law Scholars Conference (invitation only), June 2015, Berkeley, CA.

**Jennifer King**, “Understanding Privacy Decision-Making Using Social Exchange Theory.” Presented at The Future of Networked Privacy: Challenges and Opportunities workshop, CSCW March 2015.

**Jennifer King**. “Taken Out of Context: An Empirical Analysis of Westin’s Privacy Scale.” Presented at the Workshop on Privacy Personas and Segmentation (PPS) at SOUPS, July 2014. Menlo Park, CA, USA.

Deirdre K. Mulligan and **Jennifer King**. “Bridging the Gap Between Privacy and Design.” *University of Pennsylvania Journal of Constitutional Law*, Vol. 14, Issue 4, 2012. Selected as a Leading Paper for Policymakers by the Future of Privacy Forum, 2012.

**Jennifer King**. “How Come I’m Allowing Strangers To Go Through My Phone?: Smartphones And Privacy Expectations.” Presented at the Workshop on Usable Privacy and Security for Mobile Devices (U-PriSM) at SOUPS, July 2012. Washington, D.C., USA. Note: This paper was also presented at the Privacy Law Scholars Conference (invitation only), June 2012, Washington, D.C., USA. Selected as a Leading Paper for Policymakers by the Future of Privacy Forum, 2012.

**Jennifer King** and Deirdre K. Mulligan. “Reconceptualizing Privacy for Social Media Research and Design.” Presented at *Reconciling Privacy with Social Media* workshop, CSCW, 2012.

**Jennifer King** and Andrew McDiarmid. “Where’s The Beep? Security, Privacy, and User Misunderstandings of RFID.” In proceedings of USENIX Usability, Security, and Psychology. San Francisco, CA, April 14, 2008. Available at: <http://portal.acm.org/citation.cfm?id=1387652>

Egelman, Serge, **King, Jen**, Miller, Robert C., Ragouzis, Nick, and Shehan, Erika. “Security User Studies: Methodologies and Best Practices.” Extended abstracts of the ACM Conference on Human Factors in Computing Systems (CHI 2007). San Jose, CA, USA, April 28, 2007.

### **Research Reports and White Papers**

Daniel Ho, **Jennifer King**, Russell Wald, and Chris Wan. Building A National AI Research Resource: A Blueprint for A National Research Cloud. White Paper: Stanford Institute for Human-Centered Artificial Intelligence, October 2021. Available at: <https://hai.stanford.edu/policy/national-research-cloud>

**King, Jennifer**; Flanagan, Anne; Warren, Sheila. Redesigning Data Privacy: Reimagining Notice & Consent for Human-Technology Interaction. White paper report: World Economic Forum, 30 July 2020. Available at: <https://www.weforum.org/reports/redesigning-data-privacy-reimagining-notice-consent-for-humantechology-interaction>.

Hoofnagle, Chris; **King, Jennifer**; Li, Su; and Turow, Joseph. "How Different are Young Adults from Older Adults When it Comes to Information Privacy Attitudes and Policies?" April 14, 2010. Available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1589864](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1589864). Selected as a Leading Paper for Policymakers by the Future of Privacy Forum, 2010.

Turow, Joseph; **King, Jennifer**; Hoofnagle, Chris; Bleakley, Amy; and Hennessey, Michael. "Americans Reject Tailored Advertising and the Three Activities That Enable It." September 29, 2009. Available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1478214](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1478214)

**Jennifer King**, Deirdre Mulligan, and Steven Raphael. "CITRIS Report: An Evaluation of the Effectiveness of the City of San Francisco's Community Safety Cameras." Presented before the City of San Francisco Police Commission, January 2009. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2183381](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2183381)

Chris Jay Hoofnagle and **Jennifer King**. "Research Report: What Californians Understand About Privacy Online." September 3, 2008. Available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1262130](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1262130)

Chris Jay Hoofnagle and **Jennifer King**. "Research Report: What Californians Understand About Privacy Offline." May 15, 2008. Available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1133075](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1133075)

**Jennifer King** and Chris Jay Hoofnagle, "A Supermajority of Californians Support Limits on Law Enforcement Access to Cell Phone Location Information," February 2008. Available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1137988](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1137988)

Chris Jay Hoofnagle and **Jennifer King**. "Consumer Information Sharing: Where The Sun Still Don't Shine," December 2007. Available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1137990](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1137990)

### **Op-Eds and Popular Press**

Jennifer King. "[A Bill Designed to Protect Kids Could Change the Internet for the Better.](#)" Tech Policy Press, September 15, 2022.

**Jennifer King** and Eli MacKinnon. "[Do the DMA and DSA Have What It Takes to Take on Dark Patterns.](#)" Tech Policy Press, June 23, 2022.

Jennifer King. "[Opinion: After Rape Survivor's Arrest, It's Time To Rethink Genetic Databases.](#)" *The Washington Post*, Feb. 17, 2022.

**Jennifer King** and Jael Makagon. "[The fallacy behind private surveillance cameras in San Francisco.](#)" *Cal Matters*, August 9, 2020.

Jen King. "[Change your phone settings so Apple, Google can't track your movements.](#)" *The Conversation*, Jan. 14, 2019.

### **Invited Talks & Panels**

Regulating Artificial Intelligence Through Data Protection. [Global Privacy Assembly](#), Keynote Speaker, October 18, 2021.

[Bringing Dark Patterns To Light—An FTC Workshop.](#) Panelist, April 29, 2021.

[Dark Patterns, Icons and Toggles: A Conversation on Design and Regulation.](#) IAPP Global Summit, April 23, 2021. (panelist)

[Dark Patterns: Manipulative UX Design and the Role of Regulation.](#) Future of Privacy Forum, March 24, 2021. (main presenter)

[The Rise of Trust Brokers.](#) World Economic Forum Sustainable Development Impact Summit, Sept. 24, 2020.

["Notice, Consent, and Disclosure in Times of Crisis."](#) Atlantic Council Data Salon Series, May 27, 2020.

"Integrating Privacy, Personal Disclosure, and Social Exchange Theory: An Experimental Test." [Ostrom Workshop Colloquium](#), Indiana University, Bloomington, IN, October 21, 2019.

[The Trust Paradox: The Future of Privacy and Transparency in the Digital Economy \(panel\).](#) The Churchill Club, San Mateo, CA, March 29, 2019.

"The Cambridge Analytica Debacle," International Association of Defense Counsel, Santa Barbara, CA, February 27, 2019.

"Privacy, Anonymity, and Consent." [Conference On Mobile Position Awareness Systems and Solutions,](#) San Francisco, CA, Sept. 7, 2018.

Data Privacy Day (panel), World Economic Forum Center for the Fourth Industrial Revolution, San Francisco, CA, June 5, 2018.

[Designing Trustable Products: Microinteractions Matter For Secure UX](#) (panel). O'Reilly Design Conference, March 22, 2017.

Security & Human Behavior, Harvard Law School, May 2016.

TRUSTe Internet of Things Privacy Summit, June 17, 2015. Panelist, "Enabling Smart Cities: Planning for Privacy."

In Short – Advertising and Privacy Disclosures for a Digital World. Federal Trade Commission workshop, May 30, 2012. – Opening speaker and panelist.

How To Personalize Without Being Creepy. SXSW Interactive – March 14, 2011. Austin, TX. – Panelist.

"A Supermajority of Californians Support Limits on Law Enforcement Access to Cell Phone Location Information," given at the 37<sup>th</sup> Research Conference on Communication, Information and Internet Policy (TPRC), September 26, 2008, George Mason University, Alexandria, VA.

"Where's the Beep? Security, Privacy, and User Misunderstandings of RFID," given at "Pay On The Go: Consumers and Contactless Payment," Federal Trade Commission Town Hall Meeting, July 24, 2008, University of Washington, Seattle, WA. – Panelist.

"The State of CCTV in the United States," given at the 3<sup>rd</sup> Annual Surveillance and Society Conference "InVisibilities: The Practice and Experience of Surveillance in Everyday Life," April 3, 2008, University of Sheffield, Sheffield, England, UK.

"CCTV: Developing Privacy Best Practices," Department of Homeland Security Workshop, December 17-18, 2007, Alexandria, VA. – Panelist

"Sensors as Disruptive Technology: Guidelines for Future Development," given at the IBM Sensor Day, October 2007, UC Berkeley, Berkeley, CA.

"Embedded RFID and Everyday Things: A Case Study of the Security and Privacy Risks of the U.S. e-Passport," given at the IEEE International Conference on RFID, March 2007, Grapevine, TX.

"RFID: A Case Study of the Risks and Benefits of Location-Aware Technologies," given at the O'Reilly Emerging Technology Conference, March 8, 2006, San Diego, CA.

### **Awards, Honors and Service**

#### *Awards:*

Best Dissertation Award, Runner-Up: Information Schools (I-Schools) Organization, 2019

Selected leading paper, Future of Privacy Forum's Annual Privacy Papers for Policy Makers Award, 2012 (two papers) and 2010. *This Award recognizes leading privacy scholarship that is relevant to policymakers in the United States Congress, at U.S. federal agencies and for data protection authorities abroad.*

UC Berkeley School of Information Dr. James R. Chen Award for Outstanding Master's Final Project "Social Uses of Communication Backchannels in a Shared Physical Space," 2006.

#### *Public Service:*

Committee Member, California State Advisory Board on Mobile Privacy Policies, 2012

Member, State of California RFID Advisory Board, 10.07 – 3.08

#### *Leadership Roles (Conferences and Workshops):*

Program Committee, *Symposium on Usable Privacy and Security*, 2020

Organizer, *Redesigning Consent for Better Data Protection*, Oct. 2-3, 2019. Co-hosted with the World Economic Forum Center for the Fourth Industrial Revolution, San Francisco, CA

Program Organizer, *Workshop on Privacy Indicators and The Future of Privacy Indicators Workshop*, SOUPS, June 2016

Program Organizer, *Bridging the Gap Between Privacy by Design and Privacy in Practice*, CHI, May 2016

Program Organizer, *Privacy By Design: Privacy Enabling Design*, Computing Community Consortium, May 2015

Program Organizer, *Security User Studies: Methodologies and Best Practices*, CHI Workshop, 2007

Committee Member, Privacy & Power: Acknowledging the Importance of Privacy Design for Vulnerable Populations , CHI Workshop, 2020

Committee Member, *Ubiquitous Privacy: Research and Design for Mobile and IoT Platforms*, CSCW Workshop, 2019

Committee Member, The Future of Networked Privacy: Challenges and Opportunities, CSCW Workshop, 2015

Committee Member, *Measuring Networked Privacy*, CSCW Workshop, 2013

#### *Conference & Journal Reviewing:*

CSCW: 2019, 2017, 2016, 2015, 2013

International Workshop on Privacy Engineering – IWPE 2016

CHI: 2020, 2019, 2018, 2014

IEEE RFID 2012

## Appendix II: List of all cases Dr. King was deposed or testified at trial

### **Dr. Jen King, Testifying Roles and Depositions as of Jan. 2023**

#### Testifying Roles:

- 2012: FTC vs. Commerce Planet (8:09-cv-01324-CJC(RNBx))

#### Depositions:

- 2022: State of Arizona vs. Google (CV 2020-006219)
- 2022: Washington D.C. vs. Instacart (2020 CA 003777 B)
- 2015: FTC vs. Amazon (2:14-cv-01038-JCC)



World Leaders in Research-Based User Experience

# Usability 101: Introduction to Usability

**Summary:** How to define usability? How, when, and where to improve it? Why should you care? Overview defines key usability concepts and answers basic questions.

By Jakob Nielsen on January 3, 2012

**Topics:** Human Computer Interaction, User Testing, Web Usability

---

This is the article to give to your boss or anyone else who doesn't have much time, but needs to know the basic usability facts.

## What — Definition of Usability

Usability is a **quality attribute** that assesses how easy user interfaces are to use. The word "usability" also refers to methods for improving ease-of-use during the design process.

Usability is defined by **5 quality components**:

- **Learnability:** How easy is it for users to accomplish basic tasks the first time they encounter the design?
- **Efficiency:** Once users have learned the design, how quickly can they perform tasks?
- **Memorability:** When users return to the design after a period of not using it, how easily can they reestablish proficiency?
- **Errors:** How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
- **Satisfaction:** How pleasant is it to use the design?

TOP

design's functionality: Does it do what users need?

Usability and utility are equally important and together determine whether something is useful: It matters little that something is easy if it's not what you want. It's also no good if the system can hypothetically do what you want, but you can't make it happen because the user interface is too difficult. To study a design's utility, you can use the same user research methods that improve usability.

- Definition of **Utility** = whether it provides the **features you need**.
- Definition of **Usability** = how **easy & pleasant** these features are to use.
- Definition of **Useful** = **usability + utility**.

## Why Usability Is Important

On the Web, usability is a necessary condition for survival. If a website is difficult to use, people **leave**. If the [homepage](#) fails to clearly state what a company offers and what users can do on the site, people **leave**. If users get lost on a website, they **leave**. If a website's information is hard to read or doesn't answer users' key questions, they **leave**. Note a pattern here? There's no such thing as a user reading a website manual or otherwise spending much time trying to figure out an interface. There are plenty of other websites available; leaving is the first line of defense when users encounter a difficulty.

The first law of [ecommerce](#) is that if users cannot *find* the product, they cannot *buy* it either.

For **intranets**, usability is a matter of [employee productivity](#). Time users waste being lost on your intranet or pondering difficult instructions is money you waste by paying them to be at work without getting work done.

Current best practices call for spending about **10% of a design project's budget** on usability. On average, this will more than [double a website's desired quality metrics](#) (yielding an [improvement score](#) of 2.6) and slightly less than double an intranet's quality metrics. For software and physical products, the improvements are typically smaller — but still substantial — when you emphasize usability in the design process.

For internal design projects, think of doubling usability as cutting training budgets in half and doubling the number of transactions employees perform per hour. For external designs, think of doubling sales, doubling the number of registered users or customer leads, or doubling whatever other KPI (key performance indicator) motivated your design project.

## How to Improve Usability

There are many methods for studying usability, but the most basic and useful is **user testing**, which has 3 components:

- Get hold of some **representative users**, such as customers for an ecommerce site or employees for an intranet (in the latter case, they should work outside your department).
- Ask the users to perform **representative tasks** with the design.
- **Observe** what the users do, where they succeed, and where they have difficulties with the user interface. Shut up and **let the users do the talking**.

It's important to test users individually and let them solve any problems on their own. If you help them or direct their attention to any particular part of the screen, you have contaminated the test results.

To identify a design's most important usability problems, **testing 5 users** is typically enough. Rather than run a big, expensive study, it's a better use of resources to run many small tests and revise the design between each one so you can fix the usability flaws as you identify them. **Iterative design** is the best way to increase the quality of user experience. The more versions and interface ideas you test with users, the better.

User testing is different from **focus groups**, which are a poor way of evaluating design usability. Focus groups have a place in market research, but to evaluate interaction designs you must closely observe individual users as they perform tasks with the user interface. **Listening to what people say** is misleading: you have to watch what they actually do.

## When to Work on Usability

TOP

Usability plays a role in each stage of the design process. The resulting need for multiple studies is one reason I recommend making individual studies fast and cheap. Here are the main steps:

1. Before starting the new design, **test the old design** to identify the good parts that you should keep or emphasize, and the bad parts that give users trouble.
2. Unless you're working on an intranet, **test your competitors' designs** to get cheap data on a range of alternative interfaces that have similar features to your own. (If you work on an intranet, read the [intranet design annual](#) to learn from other designs.)
3. Conduct a **field study** to see how users behave in their natural habitat.
4. Make **paper prototypes** of one or more new design ideas and **test them**. The less time you invest in these design ideas the better, because you'll need to change them all based on the test results.
5. Refine the design ideas that test best through **multiple iterations**, gradually moving from low-fidelity prototyping to high-fidelity representations that run on the computer. Test each iteration.
6. Inspect the design relative to **established usability guidelines** whether from your own earlier studies or published research.
7. Once you decide on and implement the **final design**, test it again. Subtle usability problems always creep in during implementation.

Don't defer user testing until you have a fully implemented design. If you do, it will be impossible to fix the vast majority of the critical usability problems that the test uncovers. Many of these problems are likely to be structural, and fixing them would require major rearchitecting.

The only way to a high-quality user experience is to start user testing early in the design process and to keep testing every step of the way.

## Where to Test

If you run at least [one user study per week](#), it's worth building a dedicated usability laboratory. For most companies, however, it's fine to conduct tests in a conference room or an office — as long as you can close the door to keep out distractions. What matters is that you get hold

of real users and sit with them while they use the design. A notepad is the only equipment you need.

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 190 of 356 PageID 11267

Share this article: [Twitter](#) | [LinkedIn](#) | [Email](#)

Copyright © 1998-2023 Nielsen Norman Group, All Rights Reserved.

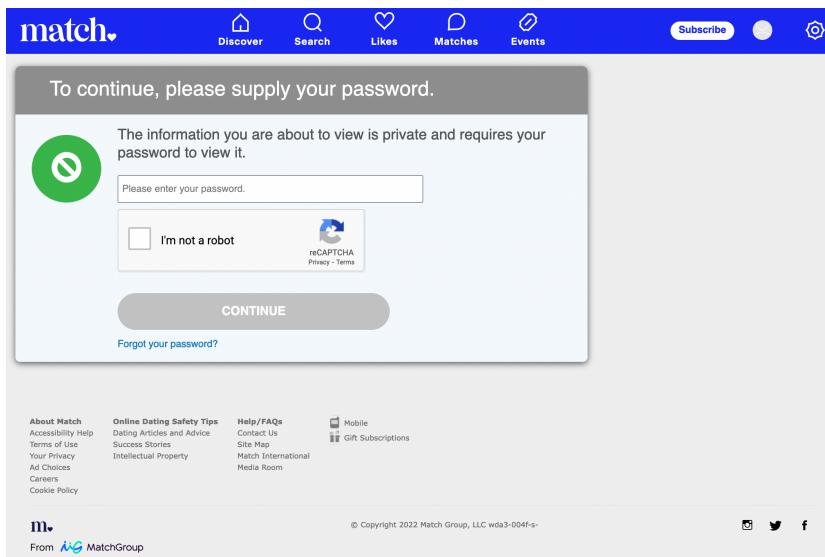
TOP

Cancellation flow:

Adds unnecessary friction

Requires a password to manage subscription

Even on a free account, you get this password barrier:



BUT! Clicking manage subscription appears to be the only thing that brings up the password window. Clicking any other option (including delete!) doesn't give you a password request. (Instead, with Delete you get a bunch of guiltshaming steps.)

TODO: map out flow w/no extra steps

TODO: map out flow including the upsell step

TODO: calculate max number of steps in existing flow

TODO: find references for quantifying friction/when adding additional steps or hurdles to an online flow translates to lost customers

- Nielsen/Norman
- Surveys - things you have to fill out
- Radio buttons - effect of that
- Is a cancellation flow the best place to offer a survey? (could we standardize the process for post-cancellation surveys, for example?) - forcing users to do it as part of the cancellation process is inappropriate
- Password friction
- Review Match.com cancellation steps:  
<https://help.match.com/hc/en-us/articles/6077124196891-Cancelling> - note that they don't provide detailed steps for canceling an account, but have very detailed steps for canceling additional features
- Sign-up for Match 3 day free trial?  
<https://www.match.com/cpx/en-us/landing/search/208264-free-trial/>

Survey questions are optional

### Which dark patterns are at play here?

1. **Obstruction** (Making a process more difficult than it needs to be, with the intent of dissuading certain action(s).) – specifically, roach motel (can't cancel). The insertion of excessive/unneeded steps into the cancellation flow is obstruction.  
[\(https://darkpatterns.uxp2.com/\)](https://darkpatterns.uxp2.com/) &  
[\(https://webtransparency.cs.princeton.edu/dark-patterns/\)](https://webtransparency.cs.princeton.edu/dark-patterns/)
2. **Forced action** (Requiring the user to perform a certain action to access (or continue to access) certain functionality.) – the survey questions (despite being “optional”) are a form of forced action - giving the user the impression that they are required. The user would have to take the time to experiment in order to ascertain that they aren’t necessary. Password prompt might be classifiable as forced action.
3. Misdirection? (Using visuals, language, or emotion to steer users toward or away from making a particular choice.) – this might be a question of analyzing language, placement of links, etc. carefully
  - a. The language used might encourage users to fill out the survey, even though it’s optional. Exs: “Tell us more.” “Before you go, help us make Match.com better.” These statements lead users to believe they *must* divulge their experience before canceling. A more honest way for Match to present itself would be “Would you like to take a survey?” making it clear that it is optional.
  - b. In some cases, I can see the “1000 characters remaining field” being a deterrent. Users might click back to the survey questions, change their answers in hopes of not getting this open ended text field.
  - c. “Lose the benefits,” “you risk losing,” “you won’t know.” Canceling the service is framed as a **loss** rather than a plain option. A more neutral way might be, “If you cancel now, you will lose access to: who’s viewed your profile, email communications, our current monthly rate.” also “resign” is a loaded word!



If you cancel, your last day of subscription will be 1/13/2023 and you will not be billed for any additional time.

What is the primary reason that you are looking to cancel your subscription with Match.com?

Other  
 I can't afford a subscription right now  
 I had too much going on and did not have time to date  
 Very few profiles piqued my interest  
 I met someone  
 I didn't click with the matches I met in person  
 Not many people of interest initiated contact with me  
 I didn't receive enough replies to emails I sent out

### Tell us more.

In your own words, how can we make finding love easier?

1000 characters remaining

If you cancel now, you will lose these benefits once your subscription ends:

- You won't know **who's viewed your profile**
- No more **sending and responding to emails**
- You risk losing your **current monthly rate**

[Back to home](#) [Continue Cancellation](#)

JP: These are some of the initial dps identified from the report and documents. If any are beyond the scope of what we're mapping, let me know and I'll strike it.

- Bait and Switch: Nonsubscribers receive emails indicating a Match.com user has expressed interest in him or her ('bait'). Upon buying a subscription to Match.com new subscribers learn the account that reached out to them was fraudulent or 'unavailable' for viewing ('switch').
- Trick Questions: The Guarantee Program Subscription indicates that users are eligible for a Guarantee Extension (free six-month subscription) if they have not met their "special someone." In obtaining the extension, users are asked, "Did you meet anyone during your 6-month guarantee program?" This question is misleading, asking users if they have met *anyone* during their subscription period rather than if they have met their "special someone." The terminology change from the service agreement to the eligibility question tricks users into answering in a way that excludes them from being eligible for the Guarantee Extension.
- Roach Motel: Brignull describes the "roach motel" as when "the design makes it very easy for you to get into a certain situation, but then makes it hard for you to get out of it (e.g. a subscription)."<sup>1</sup> Match.com attracts users to their subscription services with Guarantee Extensions and emails from "interested" users. But, canceling a subscription proves lengthy, including the provision of a password and survey answers. The cancellation process can often exceed six page clicks. Users routinely get billed after they believed they canceled their subscription.
- Hidden Information: Match.com frequently hides or fails to disclose relevant information to users. For example, the survey form during the cancellation flow is actually optional: it is possible for users to click through the flow and cancel without providing answers. However, this fact is *never stated* during the cancellation flow, nor are users asked if they want to complete a survey. Moreover, statements such as "Tell us more." and "Before you go, help us make Match.com better" lead users to believe the survey is compulsory. Other important eligibility requirements are embedded in unnumbered paragraphs in the Guarantee Program rules, including the presence of a progress page.

---

<sup>1</sup> Brignull, *supra*.

- **Forced Continuity:** This “negative option renewal” prolongs users’ service with Match.com after their initial subscription: subscribers are charged automatically for a subsequent term unless they explicitly cancel the subscription. Subsequently, “this pattern takes advantage of users’ failure to check up on service expiration dates, either for a free trial or for a limited-time use of a paid service, by **assuming** upon service expiration that the user either wants to continue the paid service...and charges the user.”<sup>2</sup>

### **Total number of steps to cancel**

2016:

1. Select settings
2. Select Change/Cancel membership from account settings page
3. Enter password on password screen
4. Page 1 of cancellation flow: Click “Cancel Subscription” from subscription menu options
- 5.

### **Notes from Wroblewski, Web Form Design: Filling in the Blanks**

“To keep people focused on completing a form, you also should consider which Web site elements help illuminate a clear path to completion and which elements distract from it.”

“Removing interface elements not directly related to completing a form helps keep people on task and removes paths to abandonment.” (Ch. 3)

Best practices (Ch. 3):

Make sure that you illuminate a clear path to completion through a form by using clear scan lines and effective visual pacing that comfortably takes people from start to finish.

For mission-critical forms like check-out or registration, remove distractions and any links or content that may lead to form abandonment.

### **Ch. 10: Unnecessary Inputs**

- Discussion of removing questions that can apply to the survey questions

“Any question you ask people requires them to parse it, formulate a response, and then input their answer in the affordance you have provided on the form. Being vigilant about every question you ask allows you to remove questions that are not absolutely necessary, or can be asked at a better time or place, or can be inferred automatically.”

### **Research on password friction:**

<https://uxdesign.cc/15-rules-of-user-sign-in-experience-ae9011d04ee3>

---

<sup>2</sup> Gray, *supra* at 6.

“Unless your site holds sensitive information, allow persistent logins. This is especially true for ecommerce sites. Persistent logins allow the user to experience the site and the actions they’ve taken. You are a UX criminal if you auto-logout users after a certain time. Sessions may expire, but let the users actions (like items added to cart), remain. You can restrict access to personal information with a password prompt, outside of session expiry. Amazon does this beautifully by keeping you partially logged in and asking for authentication only when you need to access personal information.” - useful for making the argument that the “personal info” they are restricting access to is inconsistent both internally compared to other parts of the account, as well as comparatively across other companies

<https://www.beyondidentity.com/blog/password-resets-and-the-consumer-journey>

- “Half of respondents were likely to leave a site if required to sign-in with a password.”
- Includes online dating in their summary of sites where users have to reset passwords

<https://www.mcclatchydc.com/news/nation-world/national/article156635539.html>

Forgot your password? You have too many and stores are losing business over it By Tim Johnson tjohnson@mcclatchydc.com Updated June 16, 2017 7:03 PM

- Baymard says it sees an 18.75 percent abandonment rate due to reset email issues.

<https://baymard.com/research/checkout-usability>

- During testing, receiving the **password-reset email** was an especially problematic step, with many participants becoming frustrated and abandoning their task when password emails were delayed or caught in spam filters, or when they had separate issues with signing in to their email account in the first place.
- Indeed, our testing revealed that, in practice, restrictive-password requirements carry serious checkout UX — and, thus, conversion rate — consequences. Some sites during our testing, saw up to 18% abandonment rates among all their existing account users, as these users tried to sign into their existing accounts but couldn’t due to forgotten passwords (and ended up abandoning during the password reset process).
- <https://www.spiceworks.com/marketing/ecommerce/news/58-consumers-abandon-shopping-carts-due-to-log-in-frustrations-survey-finds/>
  - The survey that polled 1,000 consumers in the U.S. revealed that 58% of consumers have abandoned carts and stopped their purchases due to difficulty signing in. Consumers canceled these transactions because they could not remember their password or were being forced to create a new account and password to make the purchase.
  - Note that I can’t find the details on this survey, so cite with caution.

#### **Friction, interaction cost, cognitive load:**

<https://www.nngroup.com/articles/pain-points/>

<https://www.nngroup.com/articles/interaction-cost-definition/>  
<https://www.nngroup.com/articles/minimize-cognitive-load/>

From mathur's paper 'what makes a dark pattern dark':

<https://arxiv.org/pdf/2101.04843.pdf>

2.3.1 Asymmetric. Asymmetric dark patterns impose unequal burdens on the choices available to the user. The choices that benefit the service are feature prominently while the options that benefit the user are typically tucked away behind several clicks or are obscured from view by varying the style and position of the choice. Asymmetric dark patterns are particularly common in consent interfaces. For instance, the Trick Questions dark pattern can impose a cognitive burden on choices that withhold consent by using confusing language and double negatives. The Confirmshaming dark pattern can use emotion to burden choices, associating guilt with certain choices and not others. Privacy Zuckering burdens choices with user interface friction, hiding privacy-respecting settings behind obscure menus.

The concern about the cognitive burden of an interface has not been cited an explicit normative concern in the dark patterns literature. If the concern is raised, it is in the context of specific dark patterns such as Nagging, Hard to Cancel, and Hidden Legalese Stipulations (and other information overloading dark patterns). As one example, in the context of cookie consent dialogs, Soe et al. [47] argue that cookie consent dialogs without a negative option to deny consent "also introduce additional cognitive burden on the user." Figure 2 shows once instance of a cookie consent dialog with a hard to exercise deny option

The regulatory objectives perspective on dark patterns is more instrumental than normative—the most forceful normative arguments for implementing regulatory objectives are typically the normative arguments for those objectives, rather than compliance with regulation in the abstract. This perspective does not inherently advance a normative argument about why we should care financial losses, privacy harms, or cognitive burdens, beyond noting whether the law directs us to care about those values. This perspective does come with a significant advantage, though: fashioning regulation into measurable metrics for empirical research is usually much easier than adapting normative principles to research.

Evaluation. The regulatory objectives perspective on dark patterns is more instrumental than normative—the most forceful normative arguments for implementing regulatory objectives are typically the normative arguments for those objectives, rather than compliance with regulation in the abstract. This perspective does not inherently advance a normative argument about why we should care financial losses, privacy harms, or cognitive burdens, beyond noting whether the law directs us to care about those values. This perspective does come with a significant advantage, though: fashioning regulation

into measurable metrics for empirical research is usually much easier than adapting normative principles to research.

**Caro's paper:**

<https://www.gmfus.org/sites/default/files/Sinders%2520-%2520Design%2520and%2520Information%2520Policy%2520Goals.pdf>

- Don Norman's 1988 Design of Everyday Things helped popularize the term "User-Centered Design."<sup>3</sup> His six design principles have since become foundational in the product design space.<sup>4</sup> They are:
  - Visibility, referring to how apparent functions are. The more visible functions within a product, the more likely it is for a user to be able to figure out what to do next.
  - Feedback, creating information about an action and what was accomplished.
  - Constraints, referring to how to restrict or select what kinds of interactions a user can do at any particular moment within a product.
  - Mapping, referring to the relationship between users, controls, and the effects of controls in the world. Almost all products have a relationship between controls and effects, be it a light switch, an e-commerce platform, a car, or a flashlight.
  - Consistency, referring to designing interfaces or design choices that have similar operations, interactions, and elements for specific tasks. For example, consistency can be a back button and a forward button placed in the same place throughout a digital experience.
  - Affordance, referring to the attributes of products and how those attributes guide or allow users to know how to use the object. A computer mouse invites touching with buttons but is also constrained to fit into one's hand.<sup>5</sup>
- Burying choices within multiple steps. Some labels responsive to regulatory requirements are designed to secure consent in ad tracking but are hard to find. For example, some website labels designed to comply with the European Union's General Data Protection Regulation (GDPR) hide "reject" buttons underneath multiple steps.<sup>22</sup>
- Confusion within sign-up and unsubscribe features. This can be seen in sign-up flows on websites where the user intends to sign up for one subscription but is tricked into signing up for multiple subscriptions and/or products.<sup>23</sup>
- Design can subvert or thwart policy intentions. If we look to Norman's principles for guidance in building a product, then design should clearly represent how a product functions, with user feedback, clear constraints as to what a product can do, and consistency across interfaces. Dark patterns serve as opposite examples of such principles at work, causing confusion and inconsistency in interfaces, while often not accurately presenting what a product or design is capable of. The

unsatisfactory implementation history of recent regulations offers examples of how dark patterns can subvert policy

Could we use 'ease of use' to help prove that the survey didn't read as optional?

<https://www.interaction-design.org/literature/topics/ease-of-use>

**Apple iOS/Design Guidelines for canceling an account:**

<https://developer.apple.com/design/human-interface-guidelines/patterns/managing-accounts>

If you help people create an account within your app or game, you must also help them delete it, not just deactivate it. In addition to following the guidelines below, be sure to understand and comply with your region's legal requirements related to account deletion and the right to be forgotten.

**IMPORTANT**

If legal requirements compel your app to maintain accounts or information — such as digital health records — or to follow a specific account-deletion process, clearly describe the situation so people can understand the information or accounts you must maintain and the process you must follow.

Provide a clear way to initiate account deletion within your app or game. If people can't perform account deletion within your app, you must provide a direct link to the webpage on which people can do so. Make the link easy to discover — for example, don't bury it in your Privacy Policy or Terms of Service pages.

**DEVELOPER NOTE**

If people used [Sign in with Apple](#) to create an account within your app, you revoke the associated tokens when they delete their account. See [Revoke tokens](#).

Provide a consistent account-deletion experience whether people perform it within your app or game or on the website. For example, avoid making one version of the deletion flow longer or more complicated than the other.

Consider letting people schedule account deletion to occur in the future. People can appreciate the opportunity to use their remaining services or wait until their

subscription auto-renews before deleting their account. If you offer a way to schedule account deletion, offer an option for immediate deletion as well. Tell people when account deletion will complete, and notify them when it's finished. Because it can sometimes take a while to fully delete an account, it's essential to keep people informed about the status of the deletion process so they know what to expect.

If you support in-app purchases, help people understand how billing and cancellation work when they delete their account. For example, you might need to help people understand the following scenarios:

- Billing for an auto-renewable subscription continues through Apple until people cancel the subscription, regardless of whether they delete their account.
- After they delete their account, people need to cancel their subscription or request a refund.

In addition to helping people understand these scenarios, provide information that describes how to cancel subscriptions and manage purchases. For guidance, see [Helping people manage their subscriptions](#) and [Providing help with In-App Purchases](#).

### **Survey Best Practices**

<https://www.surveymonkey.co.uk/mp/survey-guidelines/>

This suggests emailing ppl info about the survey and the survey:

<https://help.surveymonkey.com/en/surveymonkey/policy/data-collection-privacy/>

### **All unsubscribe survey stuff Caro could find**

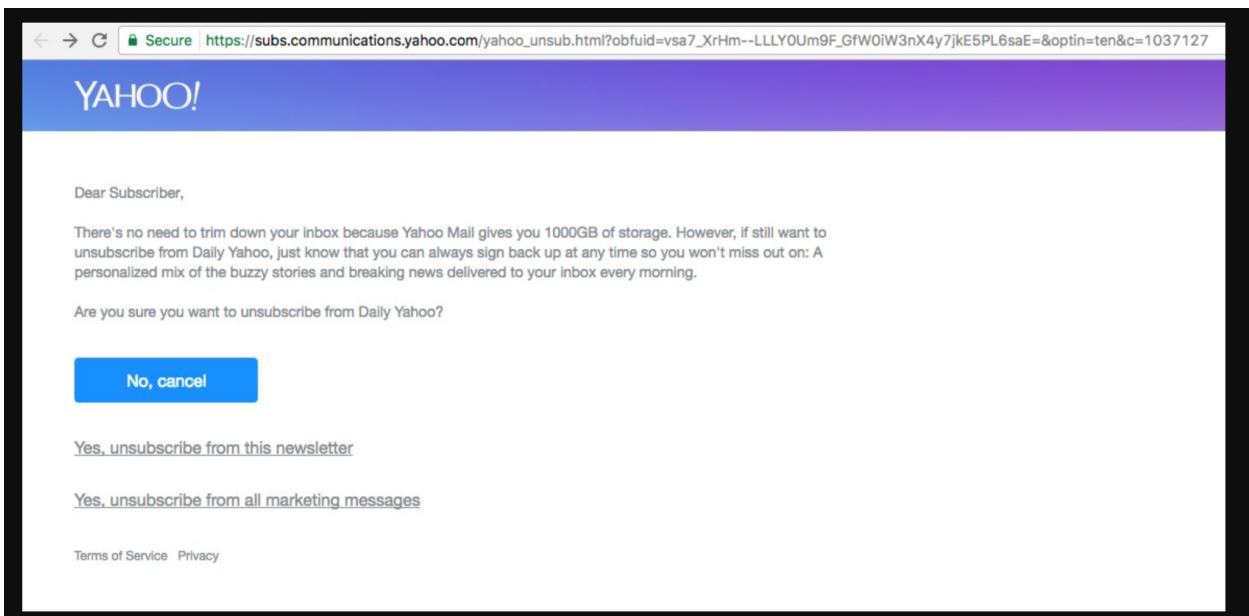
- <https://www.campaignmonitor.com/blog/email-marketing/find-out-reasons-for-unsubscribing-with-a-quick-exit-survey/>
  - This is for newsletters, fyi (their suggestions)
  - This suggests an optional survey
  - "The quality of your unsubscribe email page can make a difference in increasing subscriber retention rates. The takeaway is not to think of an unsubscribe email message as an unsubscribe exit strategy, but rather a method to improve your content for future customers."
  - All of their email unsubscribe survey examples are ONE interstitial and one question! Just one!

- <https://ux.stackexchange.com/questions/17054/should-survey-for-canceling-subscription-be-before-or-after-the-subscription-is>
  - One answer suggests a single set of radio dial questions with the un-subscribe (so one question)
    - “If a user goes to the trouble of unsubscribing from something, they *really want to*, and are having some sort of negative experience that they want to alleviate. To retain as much goodwill as possible with the customer, **let them do what they want** -- cancel. To gather a bit of data before they leave, such as the answer to “Why?” then present them with a single set of radio buttons with predetermined answers, and one optional textarea to say more. The act of submitting the form both saves the data point and allows them to complete the action they want to perform. If you really need/want to ask more than one question, then in my experience the most successful response rates are when the questions are presented after the action. Again, this allows the user to complete what it is that *they* wanted to do; a very clear response on the resulting page that their action is complete, and then a clear (brief) appeal to provide feedback, is more likely to produce results than an up-front action blocker.”
  - While this is from 2019, a follow up example shows Facebook’s delete account option which is just one question
- <https://community.hubspot.com/t5/Tips-Tricks-Best-Practices/Implement-unsubscribe-survey-when-someone-unsubscribes/td-p/681735>
  - This Q&A with hubspot suggests one question as well as why unsubscribe
- <https://www.mailerlite.com/blog/unsubscribe-survey-know-why-your-readers-leave>
  - Also suggests using a single question for the unsubscribe survey
- <https://mailchimp.com/en-gb/help/edit-or-remove-the-unsubscribe-reason-survey/>
  - Mailchimp also shows just 1 question
- <https://www.termsfeed.com/blog/unsubscribe-best-practices/>
  - This says to let users unsubscribe quickly (but they mean actually unsubscribe users in under 10 days- this isn’t about the survey)
  - But the survey example they show from Nordstroms shows the survey being called optional
  - And they suggestion making an optional, short survey
- [https://medium.com/@the\\_manifest/9-tips-for-compelling-email-unsubscribe-pages-e2e8cae01c8f](https://medium.com/@the_manifest/9-tips-for-compelling-email-unsubscribe-pages-e2e8cae01c8f)
  - This says don’t require the survey, make it optional (but the example they use doesn’t show that it’s optional)
  - “If your reader is at work or otherwise short on time, requiring them to read through a long list of choices in a survey/poll can chase them away. If you want to collect information on why people unsubscribe from your list, try adding a simple and polite survey on your unsubscribe confirmation page. But, don’t force readers to answer questions in order to unsubscribe.”

- <https://www.litmus.com/blog/the-dos-and-donts-of-unsubscribes/>
  - This also says “**Don’t**: Make people fill out a survey *before* they’ve unsubscribed”

Examples of other experts calling or highlighting the visual dark patterns in the Match.com user flow as dark patterns:

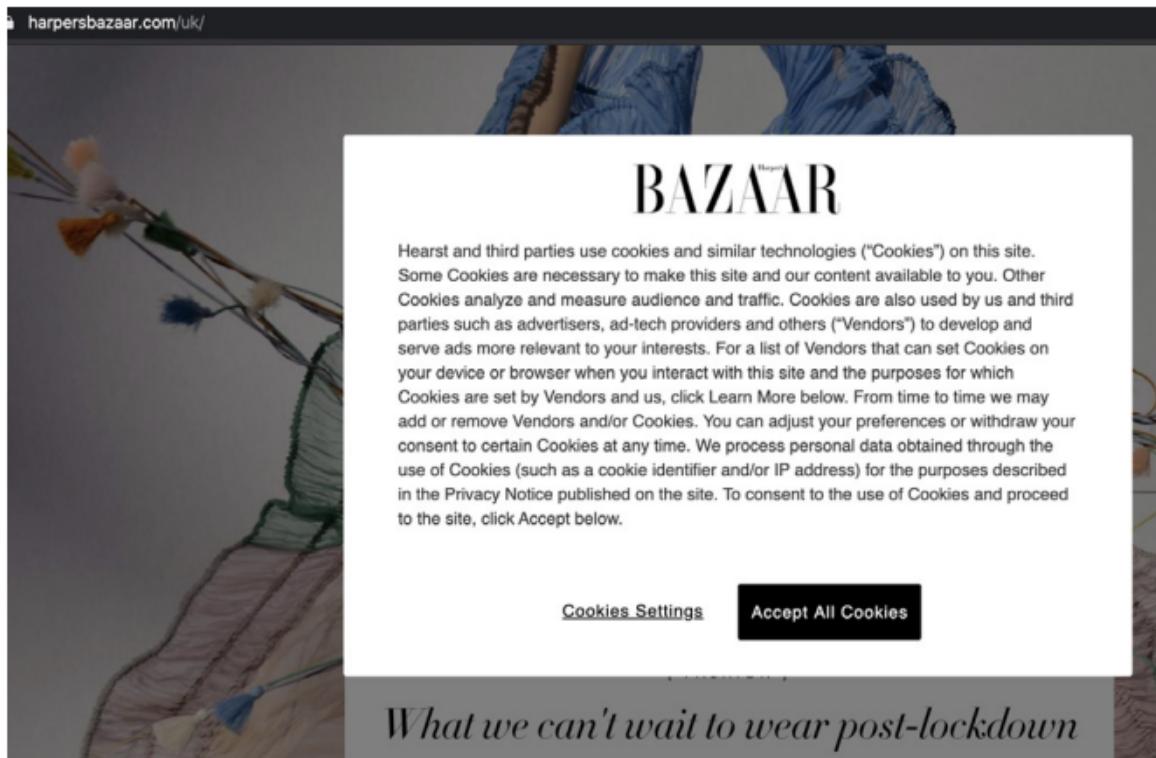
- Yahoo Unsubscribe:



<https://darkpatterns.uxp2.com/pattern/yahoo-confusing-unsubscribe/>

- Unclear terms of subscription- Adobe-  
<https://darkpatternstipline.org/sightings/unclear-terms-of-subscription/>

- Harper's Bazaar cookie banner example:



## 2.2. Harper's Bazaar's GDPR interstitial, May 2, 2020.

<https://www.gmfus.org/sites/default/files/Sinders%2520-%2520Design%2520and%2520Information%2520Policy%2520Goals.pdf>

- Is this relevant?
  - <https://dl.acm.org/doi/pdf/10.1145/3411764.3445779>
  - 2.1.1 Design choices that impact user behavior. In 2019, Utz et al. [96] conducted a field study on more than 80,000 German participants. Using a shopping website, they measured how the design of consent banners influence the behaviour of people acceptance or denial of consent. They found that small UI design decisions (such as changing the position of the notice from top to bottom of the screen) substantially impacts whether and how people interact with cookie consent notices. One of their experiments indicated that dark patterns strategies such as interface interference (highlighting “Accept” button in a binary choice with “Decline”), and pre-selected choices for different uses of cookies has a strong impact on whether the users accept the third-party cookies. In their 2020 study, Nouwens et al. [76] performed a study on the impact of various design choices relating to consent notices, user interface nudges and the level of granularity of options. They scraped the design and text of the five most popular CMPs on top 10,000 websites in the UK, looking for the presence of three features: 1) if the consent was given in an explicit or implicit form; 2) whether the ease of acceptance was the same as rejection—by checking whether accept is the same

widget (on the same hierarchy) as reject; and 3) if the banner contained pre-ticked boxes, considered as noncompliant under the GDPR [44, Recital 32]. In their results, they found less than 12% of the websites they analyzed to be compliant with EU law. In their second experiment, they ran a user study on 40 participants, looking at the effect of 8 specific design on users' consent choices. They recorded an increase of 22 percentage points in given consent when the "Reject all" button was removed from the first page, and "hidden" at least two clicks away from this first page. Finally, they found a decrease of 8 to 20 percentage points when the control options are placed on the first page

CHI '21, May 8–13, 2021, Yokohama, Japan

Gray, et al.

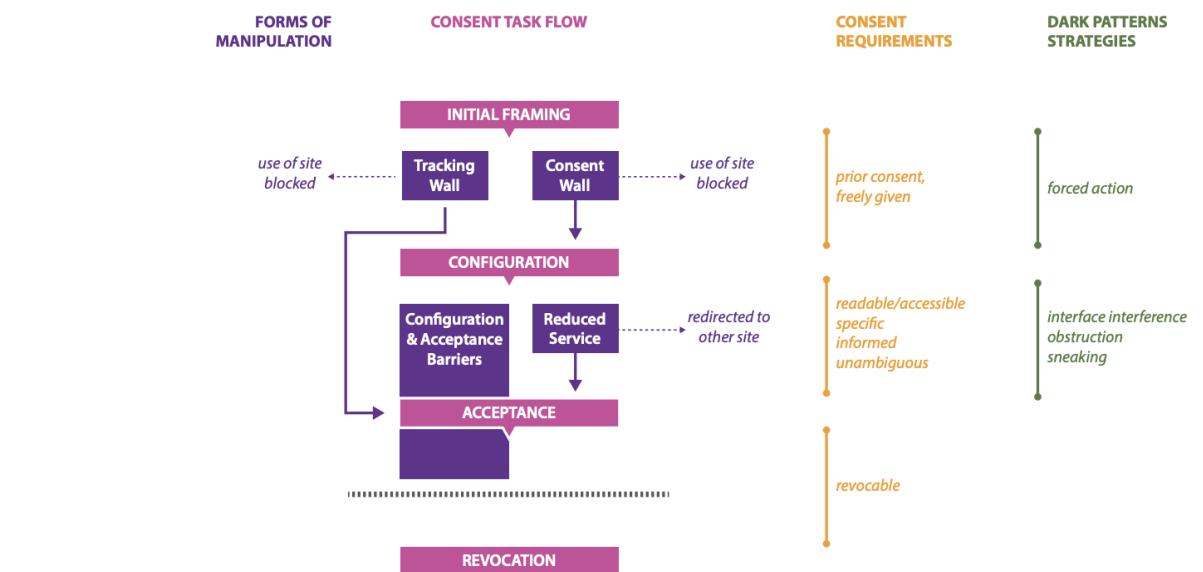


Figure 7: Flowchart describing the forms of manipulation we observed in our dataset in relation to the consent task flow, legal consent requirements, and dark patterns strategies.

Online dating dark patterns (from academic literature and online resources):

- This online website about dark patterns has a comment about Match.com from 2013
  - <https://90percentofeverything.com/2013/07/23/the-slippery-slope/index.html>
- This is all about matching expectations but nothing on dating
  - <https://www.system-concepts.com/insights/persuasive-design-vs-dark-patterns/>
- This mentions an FTC and match.com case as an example of dark patterns..."Despite the overall similarity of the distributions in Figure 1, it does give us our first hints of differences across the modalities. First, the app modality produced the longest tail, with apps like Match Dating and Wish containing 18 and 17 dark patterns respectively.

Second, the service in our corpus with the fewest dark patterns overall (USPS Mobile) only contained one pattern in the app modality and none in the two browser modalities, which contributes to the browser modalities starting at 0.”

- [https://www.ftc.gov/system/files/ftc\\_gov/pdf/PrivacyCon-2022-Gunawan-Pradeep-Choffnes-Hartzog-Wilson-A-Comparative-Study-of-Dark-Patterns-Across-Mobile-and-Web-Modalities.pdf](https://www.ftc.gov/system/files/ftc_gov/pdf/PrivacyCon-2022-Gunawan-Pradeep-Choffnes-Hartzog-Wilson-A-Comparative-Study-of-Dark-Patterns-Across-Mobile-and-Web-Modalities.pdf)
- And from the jackson sun mentioning Match.com
  - <https://eu.jacksonsun.com/story/news/2022/04/15/ftc-cracks-down-dark-patterns/7324985001/>
- From ACM on match.com
  - <https://cacm.acm.org/magazines/2020/9/246937-dark-patterns/abstract>
- Mention the adobe.com example here as similar to match.com?
  - <https://pacscenter.stanford.edu/wp-content/uploads/2021/07/I-Obscura-Zine.pdf>
- Match.com’s dark pattern mentioned as a joke here in 2016
  - <https://medium.com/@thelonelyrobot/dark-patterns-9748f2b08a95>
- First two examples are what Match.com are doing
  - <https://www.makeuseof.com/tag/what-are-dark-patterns/>

Slightly out of scope but helpful framing stuff [

It is crucial to differentiate between friction that supports mindfulness in users and friction that hinders or holds users hostage within a flow. Friction designed to increase user mindfulness appears in the form of interventions, such as keeping a food diary or photographing meals during one's fitness journey [ ]; challenges or sites of skill enhancement for video game players [ ]; and user-controlled goal; and user-set boundaries for work communications [ ]. These pauses are carefully placed in their interactions to promote users' growth, skill attainment, and quality of life. In these instances, users are provided the tools to breach pauses and control the pace of interaction, aligning them closer to their goals or values. On the other hand, friction that deters users from clearly defined goals (e.g. making a purchase, revoking subscription) leaves the users disempowered, especially when they have little control over when these obstacles are introduced. It is this deterrent friction that is of concern in Match.com's cancellation flow.

- Bait and Switch: Nonsubscribers receive emails indicating a Match.com user has expressed interest in him or her ('bait'). Upon buying a subscription to Match.com new subscribers learn the account that reached out to them was fraudulent or 'unavailable' for viewing ('switch').
- Trick Questions: The Guarantee Program Subscription indicates that users are eligible for a Guarantee Extension (free six-month subscription) if they have not met their "special someone." In obtaining the extension, users are asked, "Did you meet anyone during your 6-month guarantee program?" This question is misleading, asking users if they have met *anyone* during their subscription period rather than if they have met their "special someone." The terminology change from the service agreement to the eligibility question tricks users into answering in a way that excludes them from being eligible for the Guarantee Extension.

]





## JENNIFER KING PH.D

Information Privacy Expert



About Me

Publications

Consulting & Litigation

Selected Media Mentions

Talks, Teaching, and Service

Latest Updates

Updates are elsewhere!

In the final lap!

From Ye Old Twitter Stream ...



How is AI impacting the future of creative industries? How are scholars challenging traditional ideas about art and...

<https://t.co/GIUN92J6hQ> 01:04:16 PM May 10, 2023 Back to my iFinance site

# Consulting & Litigation

I occasionally take on consulting work, primarily litigation consulting for cases that have the potential to directly impact consumer privacy issues or otherwise have a compelling public interest aspect.

In order to avoid conflicts of interest, I do not provide consulting or advice for private companies, including startups.

I've worked as a litigation consultant and expert witness since 2009, almost exclusively for the Federal Trade Commission, state-level attorneys general, and other public clients. I've been deposed as well as testified at trial.

My consulting focus is primarily on consumer privacy issues and user interface issues related to deceptive and manipulative interfaces (dark patterns!).

Two of my cases are a matter of public record:

### FTC vs. Amazon (2:14-cv-01038-JCC) – 2014

I completed an expert report, rebuttal report, and was deposed. My expert report provided a heuristic analysis of the in-app purchase process as well as an analysis of thousands of customer complaints. The case was decided on summary judgment in favor of the FTC, finding Amazon liable for unauthorized in-app purchases by children on the Kindle Fire tablet.

### FTC vs. Commerce Planet (8:09-cv-01324-CJC(RNBx)) – 2011

19, 2023 ReplyRetweetFavorite

Related but not discussed in this piece: the impact of the “free forever” tech business model and how we pay for it...

<https://t.co/N5Z5B3laC> 18:24:06 PM May 19, 2023 ReplyRetweetFavorite



RT @CalPrivacy: We're hiring a legal intern! If you're at least a rising 3L interested in privacy law & the state rulemaking processing\_ou...

05:59:16 PM May 19, 2023

ReplyRetweetFavorite

**JENNIFER  
KING PH.D**

@kingjen Information Privacy Expert



## About Me

## Publications

### Consulting & Litigation

## Selected Media Mentions

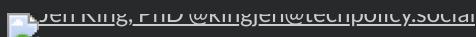
## Talks, Teaching, and Service

## Latest Updates

Updates are elsewhere!

In the final lap!

From Ye Old Twitter Stream...



How is AI impacting the future of creative industries? How are scholars challenging traditional ideas about art and...

<https://t.co/GIUN92J6hQ> 01:04:16 PM May 19, 2023 ReplyRetweetFavorite

I completed an expert report, rebuttal report, was deposed, and testified at trial. The substance of my report was a heuristic evaluation of a portion of the Commerce Planet website to determine the clarity and conspicuousness of negative option marketing disclosures to consumers. The case resulted in a permanent injunction, restitution, and disgorgement against the defendant for deceptive and unfair practices violating Section 5(a) of the FTC Act.

[Case 3:19-cv-02281-K Document 219 Filed 10/2/23 Page 208 of 356 PageID 11285](#)

Copyright 2011-2022 Jen King

UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF TEXAS  
DALLAS DIVISION

---oo---

FEDERAL TRADE COMMISSION,  
Plaintiff,  
vs. No. 3:19-cv-02281-K  
MATCH GROUP, INC., a  
corporation, MATH GROUP, LLC,  
formerly MATCH.COM, LLC, a  
Limited Liability Company,

Defendants.

---

DEPOSITION OF  
JENNIFER KING, PH.D.  
\*\*\*CONFIDENTIAL\*\*\*

---

THURSDAY, JULY 27, 2023

REPORTED BY: HOLLY THUMAN, CSR No. 6834, RMR, CRR  
JOB NUMBER 6028094

1	--oo--	1	(Exhibits, cont'd)
2	Videotaped deposition of JENNIFER KING, PH.D.,	2	Exhibit 11 Printout of web page from 214
3	taken by the Defendant, at SIDLEY AUSTIN LLP, 555		public.govdelivery.com
4	California Street, San Francisco California 94104,	3	
5	commencing at 9:02 A.M., on THURSDAY, JULY 27, 2023,	4	--oo--
6	before me, HOLLY THUMAN, CSR, RMR, CRR.	5	INSTRUCTIONS TO WITNESS/REQUESTS TO MARK TRANSCRIPT
7	--oo--	6	PAGE LINE
8	APPEARANCES	7	Instruction not to answer 42 12
9	FOR THE PLAINTIFF:	8	Instruction not to answer 66 21
10	U.S. FEDERAL TRADE COMMISSION	9	--oo--
	1999 Bryan Street, Suite 2150	10	
11	Dallas, Texas 75201	11	
	By: M. HASAN AIJAZ, Attorney at Law	12	
12	MAijaz@ftc.gov	13	
13	FOR DEFENDANT:	14	
14	SIDLEY AUSTIN LLP	15	
	1999 Avenue of the Stars, 17th Floor	16	
15	Los Angeles, California 90067	17	
	By: CHAD S. HUMMEL, Attorney at Law	18	
16	CHummel@sidley.com	19	
17	SIDLEY AUSTIN	20	
	2021 McKinney Avenue, Suite 2000	21	
18	Dallas, Texas 75201	22	
	By: CHELSEA A. PRIEST, Attorney at Law	23	
19	CPriest@sidley.com	24	
20	ALSO PRESENT:	25	
21	JEANETTE TECKMAN, In-house counsel, Match.com		
22	SAMUEL KITCHENS, Match.com (Remote)		
23	BRANDON WARD, Precocity (Remote)		
24			
25			

Page 2

Page 4

1	I N D E X	1	THURSDAY, JULY 27, 2023
2	INDEX OF EXAMINATIONS	2	9:02 A.M.
3	EXAMINATION BY: PAGE	3	--oo--
4	MR. HUMMEL 5	4	JENNIFER KING, PH.D.,
5	MR. AIJAZ 228	5	
6	--oo--	6	called as a witness, having been first duly
7	EXHIBITS MARKED FOR IDENTIFICATION	7	sworn, was examined and testified as follows:
8	NO. DESCRIPTION PAGE	8	---oO---
9	Exhibit 1 Expert Report of Dr. Jennifer 5	9	EXAMINATION BY MR. HUMMEL
	King	10	(Deposition Exhibits 1 and 2 were marked for
10	Exhibit 2 Rebuttal Report of Dr. Jennifer 5	11	identification.)
11	King	12	BY MR. HUMMEL:
12	Exhibit 3 Nielsen Norman Group document, 34	13	Q. Good morning.
	"How to Conduct a Heuristic	14	A. Good morning.
13	Evaluation"	15	Q. My name is Chad Hummel. I represent Match,
14	Exhibit 4 Nielsen Norman Group Heuristic 44	16	the defendants in this case.
	Evaluation Workbook	17	You understand you're under oath?
15	Exhibit 5 2016 Flow Figures - King Report 95	18	A. I do.
16	Exhibit 6 2019 Flow Figures - King Report 95	19	Q. And you are providing expert testimony in this
17	Exhibit 7 2022 Flow Figures - King Report 95	20	case?
18	Exhibit 8 Expert Report of Brandon Ward 112	21	A. I am.
19	Regarding Match.com's Online	22	Q. And you're being paid by the Federal Trade
	Subscription Cancellation Flow,	23	Commission for that testimony. Correct?
20	January 13, 2023	24	A. I am.
21	Exhibit 9 Screenshot headed on the first 184	25	Q. Okay. And you formed some opinions, have you,
	page at the top "Dating"		Page 5
22	Exhibit 10 Screenshot headed at top of 195		
23	first page "Suggested"		
24	(Cont'd)		

Page 3

2 (Pages 2 - 5)

<p>1 employer.</p> <p>2 BY MR. HUMMEL:</p> <p>3 Q. Who was that?</p> <p>4 A. The Samuelson Law, Technology, and Public</p> <p>5 Policy Clinic at the University of California Berkeley.</p> <p>6 Q. And you were paid for that work?</p> <p>7 A. I was an employee, so I did it as, you know,</p> <p>8 part of my work.</p> <p>9 Q. Have you ever designed an app for a paying</p> <p>10 client?</p> <p>11 A. No, I have not.</p> <p>12 Q. How many nonacademic corporate clients have</p> <p>13 paid you to research software?</p> <p>14 MR. AIJAZ: Objection. Vague.</p> <p>15 THE WITNESS: I don't think I've researched</p> <p>16 software for anybody, so I would say zero.</p> <p>17 BY MR. HUMMEL:</p> <p>18 Q. How many nonacademic corporate clients have</p> <p>19 ever paid you to do a heuristic analysis?</p> <p>20 A. Sorry, I'm trying to remember.</p> <p>21 I mean, I have done this work as part of being</p> <p>22 an employee, not necessarily as a consultant, in the</p> <p>23 past.</p> <p>24 Q. So the question is: How many nonpaying</p> <p>25 corporate clients have paid you to do a heuristic</p>	<p>1 they decided that they didn't want to cancel?</p> <p>2 MR. AIJAZ: Objection. Compound.</p> <p>3 THE WITNESS: Okay. Sorry.</p> <p>4 I'm -- for any of the three flows, did I --</p> <p>5 I'm sorry.</p> <p>6 BY MR. HUMMEL:</p> <p>7 Q. Did you attempt to determine the number of</p> <p>8 people who entered the flow and then, during the time</p> <p>9 they were in the flow, decided they didn't want to</p> <p>10 cancel?</p> <p>11 A. Okay. No, I did not.</p> <p>12 Q. Did you, for any of the flows you analyzed,</p> <p>13 determine how long on average it took consumers to</p> <p>14 answer either one of the survey questions or both?</p> <p>15 A. No.</p> <p>16 MR. AIJAZ: Compound.</p> <p>17 THE WITNESS: Sorry. No, I did not.</p> <p>18 BY MR. HUMMEL:</p> <p>19 Q. Did you yourself, when you looked at the video</p> <p>20 of the flow, determine how long it took a consumer to</p> <p>21 answer the first survey question?</p> <p>22 MR. AIJAZ: Objection. Vague.</p> <p>23 THE WITNESS: No. I mean -- and, of course,</p> <p>24 I'm not going to use the video tester's experience as a</p> <p>25 proxy because I don't know who, you know, made the</p>
<p>Page 86</p> <p>1 analysis?</p> <p>2 A. I'm sorry. Did you say "nonpaying"?</p> <p>3 Q. How many nonacademic --</p> <p>4 A. Sorry.</p> <p>5 Q. -- corporate clients have paid you to do a</p> <p>6 heuristic analysis?</p> <p>7 A. As a consultant, I think, probably, zero.</p> <p>8 Q. How many nonacademic corporate clients have</p> <p>9 paid you to run and facilitate a usability study?</p> <p>10 A. None. I haven't done that as a consultant for</p> <p>11 corporate clients.</p> <p>12 MR. HUMMEL: Okay. We'll take a five-minute</p> <p>13 break.</p> <p>14 MR. AIJAZ: Sure.</p> <p>15 (Recess from 10:39 A.M. to 10:54 A.M.)</p> <p>16 MR. HUMMEL: All right. We can go back on.</p> <p>17 Q. You understand you're still under oath?</p> <p>18 A. I do.</p> <p>19 Q. Any reason you can't continue to give your</p> <p>20 best testimony?</p> <p>21 A. Not at all.</p> <p>22 Q. So for any of the three web flows that you</p> <p>23 analyzed, did you attempt to determine the number of</p> <p>24 people who entered the flow and did not complete the</p> <p>25 cancellation process but who did not complete because</p>	<p>Page 88</p> <p>1 video.</p> <p>2 BY MR. HUMMEL:</p> <p>3 Q. Did you attempt to assess how long it took</p> <p>4 consumers to evaluate and decide on a save offer if</p> <p>5 they were offered that?</p> <p>6 MR. AIJAZ: Objection. Vague.</p> <p>7 THE WITNESS: No. I did not assess how long</p> <p>8 it would take them to decide on a save offer.</p> <p>9 BY MR. HUMMEL:</p> <p>10 Q. Or to look at the page?</p> <p>11 A. No, I did not.</p> <p>12 Q. And did you attempt to assess -- you</p> <p>13 understand that there's a second survey typically</p> <p>14 presented to consumers that is really attempting to</p> <p>15 consumer NPS, net promoter score.</p> <p>16 And you're familiar with that concept. Right?</p> <p>17 A. Let's just -- let me just be -- let's be</p> <p>18 specific so we're on the same page.</p> <p>19 So you're talking about -- yes -- what I'm</p> <p>20 calling -- I'm looking at 2016.</p> <p>21 Q. Sure.</p> <p>22 A. Page 29 of my report.</p> <p>23 You're talking about the -- what I call the --</p> <p>24 page 4 of the cancellation flow there, with the</p> <p>25 headline "Tell Us More."</p>

Page 89

23 (Pages 86 - 89)

1 Q. So you didn't evaluate Heuristic Number 2,  
 2 which is the "Match between the system and the real  
 3 world." Correct?  
 4 A. Correct.  
 5 Q. And you didn't evaluate Heuristic Number 3,  
 6 which is "User control and freedom." Correct?  
 7 A. Well, actually, it's not that I didn't  
 8 evaluate them. I didn't find them relevant. Let's  
 9 make that clear.  
 10 It's not like I skipped them. I looked at all  
 11 ten, and I applied the ones I thought that the -- the  
 12 cancellation flow potentially violated.  
 13 Q. Right. So you didn't think it violated  
 14 Heuristic 2, which is "Match between the system and the  
 15 real world," because you didn't put that in your  
 16 report. Correct?  
 17 A. Correct.  
 18 Q. And you didn't think it violated Heuristic 3,  
 19 which is "User control and freedom." Correct?  
 20 A. Correct.  
 21 Q. And you didn't opine that the Match  
 22 cancellation flow violated Heuristic 5, which is "Error  
 23 prevention." Correct?  
 24 A. Correct.  
 25 Q. And you didn't opine that the Match

Page 98

1 Q. And you understand that the opinions that  
 2 you're going to be allowed to testify about at trial  
 3 are those that are contained in your report. Correct?  
 4 A. Correct.  
 5 MR. AIJAZ: Objection. Calls for a legal  
 6 conclusion and analysis and foundation.  
 7 BY MR. HUMMEL:  
 8 Q. That's your understanding. Right?  
 9 A. That's -- yes.  
 10 Q. Why was it that you didn't consider any of  
 11 Nielsen's usability components -- strike that.  
 12 Why is it that you didn't opine about any of  
 13 Nielsen's usability components in your expert report?  
 14 A. Those are components that, generally, are not  
 15 something I use in my work.  
 16 Q. Why?  
 17 A. They -- I just haven't seen them as relevant.  
 18 Q. So learnability, efficiency, memorability,  
 19 errors, and satisfaction are not relevant?  
 20 A. They are -- for the purposes of -- of my  
 21 analysis, no. I wasn't concerned with reviewing those  
 22 components.  
 23 Let's go back and talk about your expertise.  
 24 A. Sure.  
 25 Q. You hold yourself out as an information

Page 100

1 cancellation flow violated Heuristic 6, which is  
 2 "Recognition rather than recall." Correct?  
 3 A. Right.  
 4 Q. And you didn't opine that the Match  
 5 cancellation flow violated Heuristic 7, which is  
 6 "Flexibility and efficiency of use." Correct?  
 7 A. Correct.  
 8 Q. And you didn't opine that the Match  
 9 cancellation flow violated Heuristic Number 9, which is  
 10 "Help users recognize, diagnose, and recover from  
 11 errors." Correct?  
 12 A. Correct.  
 13 Q. And you didn't opine about -- you didn't opine  
 14 that Match's cancellation flow violated Heuristic  
 15 Number 10, "Help and documentation."  
 16 Do you see that?  
 17 A. I do.  
 18 Q. Is that true?  
 19 A. I did not include that.  
 20 Retrospectively, I might have included it the  
 21 more I considered questions around those help pages,  
 22 but -- but the --  
 23 Q. Right. But it's not in your report. Correct?  
 24 That's all I'm saying.  
 25 A. Right. It's not in my report.

Page 99

1 privacy expert. Correct?  
 2 A. Yes.  
 3 Q. This case doesn't involve information privacy.  
 4 Right?  
 5 A. That's true.  
 6 Q. Are you an expert in cognitive psychology?  
 7 A. I am an expert in some aspects of cognitive  
 8 psychology as they relate to HCI; but, no, I am not a  
 9 cognitive psychologist.  
 10 Q. Are you familiar with Shari Diamond's treatise  
 11 on appropriate consumer surveys?  
 12 A. No, I'm not.  
 13 Q. So I take it you didn't use any of her  
 14 criteria for assessing whether Mr. Ward's usability  
 15 study satisfied the criteria that Shari Diamond set  
 16 forth for such consumer empirical study.  
 17 MR. AIJAZ: Objection. Foundation.  
 18 THE WITNESS: I don't believe I've ever  
 19 covered her work in my survey research background.  
 20 BY MR. HUMMEL:  
 21 Q. What is survey bias?  
 22 A. I think that could have potentially several  
 23 answers.  
 24 Can you be more specific? I'm not sure where  
 25 you're -- what you mean precisely.

Page 101

26 (Pages 98 - 101)



# Reference Guide on Survey Research

SHARI SEIDMAN DIAMOND

*Shari Seidman Diamond, J.D., Ph.D., is the Howard J. Trienens Professor of Law and Professor of Psychology, Northwestern University, and a Research Professor, American Bar Foundation, Chicago, Illinois.*

## CONTENTS

- I. Introduction, 361
  - A. Use of Surveys in Court, 363
  - B. Surveys Used to Help Assess Expert Acceptance in the Wake of *Daubert*, 367
  - C. Surveys Used to Help Assess Community Standards: *Atkins v. Virginia*, 369
  - D. A Comparison of Survey Evidence and Individual Testimony, 372
- II. Purpose and Design of the Survey, 373
  - A. Was the Survey Designed to Address Relevant Questions? 373
  - B. Was Participation in the Design, Administration, and Interpretation of the Survey Appropriately Controlled to Ensure the Objectivity of the Survey? 374
  - C. Are the Experts Who Designed, Conducted, or Analyzed the Survey Appropriately Skilled and Experienced? 375
  - D. Are the Experts Who Will Testify About Surveys Conducted by Others Appropriately Skilled and Experienced? 375
- III. Population Definition and Sampling, 376
  - A. Was an Appropriate Universe or Population Identified? 376
  - B. Did the Sampling Frame Approximate the Population? 377
  - C. Does the Sample Approximate the Relevant Characteristics of the Population? 380
  - D. What Is the Evidence That Nonresponse Did Not Bias the Results of the Survey? 383
  - E. What Procedures Were Used to Reduce the Likelihood of a Biased Sample? 385
  - F. What Precautions Were Taken to Ensure That Only Qualified Respondents Were Included in the Survey? 386

- IV. Survey Questions and Structure, 387
  - A. Were Questions on the Survey Framed to Be Clear, Precise, and Unbiased? 387
  - B. Were Some Respondents Likely to Have No Opinion? If So, What Steps Were Taken to Reduce Guessing? 389
  - C. Did the Survey Use Open-Ended or Closed-Ended Questions? How Was the Choice in Each Instance Justified? 391
  - D. If Probes Were Used to Clarify Ambiguous or Incomplete Answers, What Steps Were Taken to Ensure That the Probes Were Not Leading and Were Administered in a Consistent Fashion? 394
  - E. What Approach Was Used to Avoid or Measure Potential Order or Context Effects? 395
  - F. If the Survey Was Designed to Test a Causal Proposition, Did the Survey Include an Appropriate Control Group or Question? 397
  - G. What Limitations Are Associated with the Mode of Data Collection Used in the Survey? 401
    - 1. In-person interviews, 402
    - 2. Telephone interviews, 403
    - 3. Mail questionnaires, 405
    - 4. Internet surveys, 406
- V. Surveys Involving Interviewers, 409
  - A. Were the Interviewers Appropriately Selected and Trained? 409
  - B. What Did the Interviewers Know About the Survey and Its Sponsorship? 410
  - C. What Procedures Were Used to Ensure and Determine That the Survey Was Administered to Minimize Error and Bias? 411
- VI. Data Entry and Grouping of Responses, 412
  - A. What Was Done to Ensure That the Data Were Recorded Accurately? 412
  - B. What Was Done to Ensure That the Grouped Data Were Classified Consistently and Accurately? 413
- VII. Disclosure and Reporting, 413
  - A. When Was Information About the Survey Methodology and Results Disclosed? 413
  - B. Does the Survey Report Include Complete and Detailed Information on All Relevant Characteristics? 415
  - C. In Surveys of Individuals, What Measures Were Taken to Protect the Identities of Individual Respondents? 417
- VIII. Acknowledgment, 418
- Glossary of Terms, 419
- References on Survey Research, 423

## I. Introduction

*Sample surveys* are used to describe or enumerate the beliefs, attitudes, or behavior of persons or other social units.<sup>1</sup> Surveys typically are offered in legal proceedings to establish or refute claims about the characteristics of those individuals or social units (e.g., whether consumers are likely to be misled by the claims contained in an allegedly deceptive advertisement;<sup>2</sup> which qualities purchasers focus on in making decisions about buying new computer systems).<sup>3</sup> In a broader sense, a *survey* can describe or enumerate the attributes of any units, including animals and objects.<sup>4</sup> We focus here primarily on sample surveys, which must deal not only with issues of population definition, sampling, and measurement common to all surveys, but also with the specialized issues that arise in obtaining information from human respondents.

In principle, surveys may count or measure every member of the relevant population (e.g., all plaintiffs eligible to join in a suit, all employees currently working for a corporation, all trees in a forest). In practice, surveys typically count or measure only a portion of the individuals or other units that the survey is intended to describe (e.g., a sample of jury-eligible citizens, a sample of potential job applicants). In either case, the goal is to provide information on the relevant population from which the sample was drawn. Sample surveys can be carried out using probability or nonprobability sampling techniques. Although probability sampling offers important advantages over nonprobability sampling,<sup>5</sup> experts in some fields (e.g., marketing) regularly rely on various forms of nonprobability sampling when conducting surveys. Consistent with Federal Rule of Evidence 703, courts generally have accepted such evidence.<sup>6</sup> Thus, in this reference guide, both the probability sample and the nonprobability sample are discussed. The strengths of probability sampling and the weaknesses of various types of non-probability sampling are described.

1. Sample surveys conducted by social scientists “consist of (relatively) systematic, (mostly) standardized approaches to collecting information on individuals, households, organizations, or larger organized entities through questioning systematically identified samples.” James D. Wright & Peter V. Marsden, *Survey Research and Social Science: History, Current Practice, and Future Prospects*, in *Handbook of Survey Research* 1, 3 (James D. Wright & Peter V. Marsden eds., 2d ed. 2010).

2. See *Sanderson Farms v. Tyson Foods*, 547 F. Supp. 2d 491 (D. Md. 2008).

3. See *SMS Sys. Maint. Servs. v. Digital Equip. Corp.*, 118 F.3d 11, 30 (1st Cir. 1999). For other examples, see notes 19–32 and accompanying text.

4. In *J.H. Miles & Co. v. Brown*, 910 F. Supp. 1138 (E.D. Va. 1995), clam processors and fishing vessel owners sued the Secretary of Commerce for failing to use the unexpectedly high results from 1994 survey data on the size of the clam population to determine clam fishing quotas for 1995. The estimate of clam abundance is obtained from surveys of the amount of fishing time the research survey vessels require to collect a specified yield of clams in major fishing areas over a period of several weeks. *Id.* at 1144–45.

5. See *infra* Section III.C.

6. Fed. R. Evid. 703 recognizes facts or data “of a type reasonably relied upon by experts in the particular field. . . .”

As a method of data collection, surveys have several crucial potential advantages over less systematic approaches.<sup>7</sup> When properly designed, executed, and described, surveys (1) economically present the characteristics of a large group of respondents or other units and (2) permit an assessment of the extent to which the measured respondents or other units are likely to adequately represent a relevant group of individuals or other units.<sup>8</sup> All questions asked of respondents and all other measuring devices used (e.g., criteria for selecting eligible respondents) can be examined by the court and the opposing party for objectivity, clarity, and relevance, and all answers or other measures obtained can be analyzed for completeness and consistency. The survey questions should not be the only focus of attention. To make it possible for the court and the opposing party to closely scrutinize the survey so that its relevance, objectivity, and representativeness can be evaluated, the party proposing to offer the survey as evidence should also describe in detail the design, execution, and analysis of the survey. This should include (1) a description of the population from which the sample was selected, demonstrating that it was the relevant population for the question at hand; (2) a description of how the sample was drawn and an explanation for why that sample design was appropriate; (3) a report on response rate and the ability of the sample to represent the target population; and (4) an evaluation of any sources of potential bias in respondents' answers.

The questions listed in this reference guide are intended to assist judges in identifying, narrowing, and addressing issues bearing on the adequacy of surveys either offered as evidence or proposed as a method for developing information.<sup>9</sup> These questions can be (1) raised from the bench during a pretrial proceeding to determine the admissibility of the survey evidence; (2) presented to the contending experts before trial for their joint identification of disputed and undisputed issues; (3) presented to counsel with the expectation that the issues will be addressed during the examination of the experts at trial; or (4) raised in bench trials when a motion for a preliminary injunction is made to help the judge evaluate

7. This does not mean that surveys can be relied on to address all questions. For example, if survey respondents had been asked in the days before the attacks of 9/11 to predict whether they would volunteer for military service if Washington, D.C., were to be bombed, their answers may not have provided accurate predictions. Although respondents might have willingly answered the question, their assessment of what they would actually do in response to an attack simply may have been inaccurate. Even the option of a "do not know" choice would not have prevented an error in prediction if they believed they could accurately predict what they would do. Thus, although such a survey would have been suitable for assessing the *predictions* of respondents, it might have provided a very inaccurate estimate of what an actual response to the attack would be.

8. The ability to quantitatively assess the limits of the likely margin of error is unique to probability sample surveys, but an expert testifying about any survey should provide enough information to allow the judge to evaluate how potential error, including coverage, measurement, nonresponse, and sampling error, may have affected the obtained pattern of responses.

9. See *infra* text accompanying note 31.

what weight, if any, the survey should be given.<sup>10</sup> These questions are intended to improve the utility of cross-examination by counsel, where appropriate, not to replace it.

All sample surveys, whether they measure individuals or other units, should address the issues concerning purpose and design (Section II), population definition and sampling (Section III), accuracy of data entry (Section VI), and disclosure and reporting (Section VII). Questionnaire and interview surveys, whether conducted in-person, on the telephone, or online, raise methodological issues involving survey questions and structure (Section IV) and confidentiality (Section VII.C). Interview surveys introduce additional issues (e.g., interviewer training and qualifications) (Section V), and online surveys raise some new issues and questions that are currently under study (Section VI). The sections of this reference guide are labeled to direct the reader to those topics that are relevant to the type of survey being considered. The scope of this reference guide is necessarily limited, and additional issues might arise in particular cases.

## A. Use of Surveys in Court

Fifty years ago the question of whether surveys constituted acceptable evidence still was unsettled.<sup>11</sup> Early doubts about the admissibility of surveys centered on their use of sampling<sup>12</sup> and their status as hearsay evidence.<sup>13</sup> Federal Rule of Evidence

10. Lanham Act cases involving trademark infringement or deceptive advertising frequently require expedited hearings that request injunctive relief, so judges may need to be more familiar with survey methodology when considering the weight to accord a survey in these cases than when presiding over cases being submitted to a jury. Even in a case being decided by a jury, however, the court must be prepared to evaluate the methodology of the survey evidence in order to rule on admissibility. See *Daubert v. Merrell Dow Pharmas., Inc.*, 509 U.S. 579, 589 (1993).

11. Hans Zeisel, *The Uniqueness of Survey Evidence*, 45 Cornell L.Q. 322, 345 (1960).

12. In an early use of sampling, Sears, Roebuck & Co. claimed a tax refund based on sales made to individuals living outside city limits. Sears randomly sampled 33 of the 826 working days in the relevant working period, computed the proportion of sales to out-of-city individuals during those days, and projected the sample result to the entire period. The court refused to accept the estimate based on the sample. When a complete audit was made, the result was almost identical to that obtained from the sample. *Sears, Roebuck & Co. v. City of Inglewood*, tried in Los Angeles Superior Court in 1955, is described in R. Clay Sprowls, *The Admissibility of Sample Data into a Court of Law: A Case History*, 4 UCLA L. Rev. 222, 226–29 (1956–1957).

13. Judge Wilfred Feinberg's thoughtful analysis in *Zippo Manufacturing Co. v. Rogers Imports, Inc.*, 216 F. Supp. 670, 682–83 (S.D.N.Y. 1963), provides two alternative grounds for admitting opinion surveys: (1) Surveys are not hearsay because they are not offered in evidence to prove the truth of the matter asserted; and (2) even if they are hearsay, they fall under one of the exceptions as a “present sense impression.” In *Schering Corp. v. Pfizer Inc.*, 189 F.3d 218 (2d Cir. 1999), the Second Circuit distinguished between perception surveys designed to reflect the present sense impressions of respondents and “memory” surveys designed to collect information about a past occurrence based on the recollections of the survey respondents. The court in *Schering* suggested that if a survey is offered to prove the existence of a specific idea in the public mind, then the survey does constitute hearsay

703 settled both matters for surveys by redirecting attention to the “validity of the techniques employed.”<sup>14</sup> The inquiry under Rule 703 focuses on whether facts or data are “of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject.”<sup>15</sup> For a survey, the question becomes, “Was the poll or survey conducted in accordance with generally accepted survey principles, and were the results used in a statistically correct way?”<sup>16</sup> This focus on the adequacy of the methodology used in conducting and analyzing results from a survey is also consistent with the Supreme Court’s discussion of admissible scientific evidence in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*<sup>17</sup>

Because the survey method provides an economical and systematic way to gather information and draw inferences about a large number of individuals or other units, surveys are used widely in business, government, and, increasingly,

evidence. As the court observed, Federal Rule of Evidence 803(3), creating “an exception to the hearsay rule for such statements [i.e., state-of-mind expressions] rather than excluding the statements from the definition of hearsay, makes sense only in this light.” *Id.* at 230 n.3. *See also Playtex Prods. v. Procter & Gamble Co.*, 2003 U.S. Dist. LEXIS 8913 (S.D.N.Y. May 28, 2003), *aff’d*, 126 Fed. Appx. 32 (2d Cir. 2005). Note, however, that when survey respondents are shown a stimulus (e.g., a commercial) and then respond to a series of questions about their impressions of what they viewed, those impressions reflect both respondents’ initial perceptions and their memory for what they saw and heard. Concerns about the impact of memory on the trustworthiness of survey responses appropriately depend on the passage of time between exposure and testing and on the likelihood that distorting events occurred during that interval.

Two additional exceptions to the hearsay exclusion can be applied to surveys. First, surveys may constitute a hearsay exception if the survey data were collected in the normal course of a regularly conducted business activity, unless “the source of information or the method or circumstances of preparation indicate lack of trustworthiness.” Fed. R. Evid. 803(6); *see also Ortho Pharm. Corp. v. Cosprophar, Inc.*, 828 F. Supp. 1114, 1119–20 (S.D.N.Y. 1993) (marketing surveys prepared in the course of business were properly excluded because they lacked foundation from a person who saw the original data or knew what steps were taken in preparing the report), *aff’d*, 32 F.3d 690 (2d Cir. 1994). In addition, if a survey shows guarantees of trustworthiness equivalent to those in other hearsay exceptions, it can be admitted if the court determines that the statement is offered as evidence of a material fact, it is more probative on the point for which it is offered than any other evidence that the proponent can procure through reasonable efforts, and admissibility serves the interests of justice. Fed. R. Evid. 807; *e.g., Schering*, 189 F.3d at 232. Admissibility as an exception to the hearsay exclusion thus depends on the trustworthiness of the survey. *New Colt Holding v. RJG Holdings of Fla.*, 312 F. Supp. 2d 195, 223 (D. Conn. 2004).

14. Fed. R. Evid. 703 Advisory Committee Note.

15. Fed. R. Evid. 703.

16. Manual for Complex Litigation § 2.712 (1982). Survey research also is addressed in the Manual for Complex Litigation, Second § 21.484 (1985) [hereinafter MCL 2d]; the Manual for Complex Litigation, Third § 21.493 (1995) [hereinafter MCL 3d]; and the Manual for Complex Litigation, Fourth § 11.493 (2004) [hereinafter MCL 4th]. Note, however, that experts who collect survey data, along with the professions that rely on those surveys, may differ in some of their methodological standards and principles. An assessment of the precision of sample estimates and an evaluation of the sources and magnitude of likely bias are required to distinguish methods that are acceptable from methods that are not.

17. 509 U.S. 579 (1993); *see also General Elec. Co. v. Joiner*, 522 U.S. 136, 147 (1997).

administrative settings and judicial proceedings.<sup>18</sup> Both federal and state courts have accepted survey evidence on a variety of issues. In a case involving allegations of discrimination in jury panel composition, the defense team surveyed prospective jurors to obtain their age, race, education, ethnicity, and income distribution.<sup>19</sup> Surveys of employees or prospective employees are used to support or refute claims of employment discrimination.<sup>20</sup> Surveys provide information on the nature and similarity of claims to support motions for or against class certification.<sup>21</sup> In ruling on the admissibility of scientific claims, courts have examined surveys of scientific experts to assess the extent to which the theory or technique has received widespread acceptance.<sup>22</sup> Some courts have admitted surveys in obscenity cases to provide evidence about community standards.<sup>23</sup> Requests for a change of venue on grounds of jury pool bias often are backed by evidence from a survey of jury-eligible respondents in the area of the original venue.<sup>24</sup> The plaintiff in an antitrust suit conducted a survey to assess what characteristics, including price, affected consumers' preferences. The survey was offered as one way to estimate damages.<sup>25</sup> In a Title IX suit based on allegedly discriminatory scheduling of girls'

18. Some sample surveys are so well accepted that they even may not be recognized as surveys. For example, some U.S. Census Bureau data are based on sample surveys. Similarly, the Standard Table of Mortality, which is accepted as proof of the average life expectancy of an individual of a particular age and gender, is based on survey data.

19. United States v. Green, 389 F. Supp. 2d 29 (D. Mass. 2005), *rev'd on other grounds*, 426 F.3d 1 (1st Cir. 2005) (evaluating minority underrepresentation in the jury pool by comparing racial composition of the voting-age population in the district with the racial breakdown indicated in juror questionnaires returned to court); *see also* People v. Harris, 36 Cal. 3d 36, 679 P.2d 433 (Cal. 1984).

20. John Johnson v. Big Lots Stores, Inc., No. 04-321, 2008 U.S. Dist. LEXIS 35316, at \*20 (E.D. La. Apr. 29, 2008); Stender v. Lucky Stores, Inc., 803 F. Supp. 259, 326 (N.D. Cal. 1992); EEOC v. Sears, Roebuck & Co., 628 F. Supp. 1264, 1308 (N.D. Ill. 1986), *aff'd*, 839 F.2d 302 (7th Cir. 1988).

21. John Johnson v. Big Lots Stores, Inc., 561 F. Supp. 2d 567 (E.D. La. 2008); Marlo v. United Parcel Service, Inc., 251 F.R.D. 476 (C.D. Cal. 2008).

22. United States v. Scheffer, 523 U.S. 303, 309 (1998); United States v. Bishop, 64 F. Supp. 2d 1149 (D. Utah 1999); United States v. Varoudakis, No. 97-10158, 1998 WL 151238 (D. Mass. Mar. 27, 1998); State v. Shively, 268 Kan. 573 (2000), *aff'd*, 268 Kan. 589 (2000) (all cases in which courts determined, based on the inconsistent reactions revealed in several surveys, that the polygraph test has failed to achieve general acceptance in the scientific community). *Contra*, *see* Lee v. Martinez, 136 N.M. 166, 179-81, 96 P.3d 291, 304-06 (N.M. 2004). People v. Williams, 830 N.Y.S.2d 452 (2006) (expert permitted to testify regarding scientific studies of factors affecting the perceptual ability and memory of eyewitnesses to make identifications based in part on general acceptance demonstrated in survey of experts who study eyewitness identification).

23. *E.g.*, People v. Page Books, Inc., 601 N.E.2d 273, 279-80 (Ill. App. Ct. 1992); State v. Williams, 598 N.E.2d 1250, 1256-58 (Ohio Ct. App. 1991).

24. *E.g.*, United States v. Eagle, 586 F.2d 1193, 1195 (8th Cir. 1978); United States v. Tokars, 839 F. Supp. 1578, 1583 (D. Ga. 1993), *aff'd*, 95 F.3d 1520 (11th Cir. 1996); State v. Baumruk, 85 S.W.3d 644 (Mo. 2002); People v. Boss, 701 N.Y.S.2d 342 (App. Div. 1999).

25. Dolphin Tours, Inc. v. Pacifico Creative Servs., Inc., 773 F.2d 1506, 1508 (9th Cir. 1985). *See also* SMS Sys. Maint. Servs., Inc. v. Digital Equip. Corp., 188 F.3d 11 (1st Cir. 1999); Benjamin F. King, *Statistics in Antitrust Litigation*, in Statistics and the Law 49 (Morris H. DeGroot et al. eds.,

sports, a survey was offered for the purpose of establishing how girls felt about the scheduling of girls' and boys' sports.<sup>26</sup> A routine use of surveys in federal courts occurs in Lanham Act<sup>27</sup> cases, when the plaintiff alleges trademark infringement<sup>28</sup> or claims that false advertising<sup>29</sup> has confused or deceived consumers. The pivotal legal question in such cases virtually demands survey research because it centers on consumer perception and memory (i.e., is the consumer likely to be confused about the source of a product, or does the advertisement imply a false or misleading message?).<sup>30</sup> In addition, survey methodology has been used creatively to assist federal courts in managing mass torts litigation. Faced with the prospect of conducting discovery concerning 10,000 plaintiffs, the plaintiffs and defendants in *Wilhoite v. Olin Corp.*<sup>31</sup> jointly drafted a discovery survey that was administered

1986). Surveys have long been used in antitrust litigation to help define relevant markets. In *United States v. E.I. du Pont de Nemours & Co.*, 118 F. Supp. 41, 60 (D. Del. 1953), *aff'd*, 351 U.S. 377 (1956), a survey was used to develop the "market setting" for the sale of cellophane. In *Mukand, Ltd. v. United States*, 937 F. Supp. 910 (Ct. Int'l Trade 1996), a survey of purchasers of stainless steel wire rods was conducted to support a determination of competition and fungibility between domestic and Indian wire rod.

26. Alston v. Virginia High Sch. League, Inc., 144 F. Supp. 2d 526, 539–40 (W.D.Va. 1999).

27. Lanham Act § 43(a), 15 U.S.C. § 1125(a) (1946) (amended 2006).

28. E.g., Herman Miller v. Palazzetti Imports & Exports, 270 F.3d 298, 312 (6th Cir. 2001) ("Because the determination of whether a mark has acquired secondary meaning is primarily an empirical inquiry, survey evidence is the most direct and persuasive evidence."); Simon Property Group v. MySimon, 104 F. Supp. 2d 1033, 1038 (S.D. Ind. 2000) ("Consumer surveys are generally accepted by courts as one means of showing the likelihood of consumer confusion."). See also Qualitex Co. v. Jacobson Prods. Co., No. CIV-90-1183HLH, 1991 U.S. Dist. LEXIS 21172 (C.D. Cal. Sept. 3, 1991), *aff'd in part & rev'd in part on other grounds*, 13 F.3d 1297 (9th Cir. 1994), *rev'd on other grounds*, 514 U.S. 159 (1995); Union Carbide Corp. v. Ever-Ready, Inc., 531 F.2d 366 (7th Cir.), *cert. denied*, 429 U.S. 830 (1976). According to Neal Miller, *Facts, Expert Facts, and Statistics: Descriptive and Experimental Research Methods in Litigation*, 40 Rutgers L. Rev. 101, 137 (1987), trademark law has relied on the institutionalized use of statistical evidence more than any other area of the law.

29. E.g., Southland Sod Farms v. Stover Seed Co., 108 F.3d 1134, 1142–43 (9th Cir. 1997); American Home Prods. Corp. v. Johnson & Johnson, 577 F.2d 160 (2d Cir. 1978); Rexall Sundown, Inc. v. Perrigo Co., 651 F. Supp. 2d 9 (E.D.N.Y. 2009); Mutual Pharm. Co. v. Ivax Pharmas. Inc., 459 F. Supp. 2d 925 (C.D. Cal. 2006); Novartis Consumer Health v. Johnson & Johnson-Merck Consumer Pharmas., 129 F. Supp. 2d 351 (D.N.J. 2000).

30. Courts have observed that "the court's reaction is at best not determinative and at worst irrelevant. The question in such cases is, what does the person to whom the advertisement is addressed find to be the message?" American Brands, Inc. v. R.J. Reynolds Tobacco Co., 413 F. Supp. 1352, 1357 (S.D.N.Y. 1976). The wide use of surveys in recent years was foreshadowed in *Triangle Publications, Inc. v. Rohrlich*, 167 F.2d 969, 974 (2d Cir. 1948) (Frank, J., dissenting). Called on to determine whether a manufacturer of girdles labeled "Miss Seventeen" infringed the trademark of the magazine *Seventeen*, Judge Frank suggested that, in the absence of a test of the reactions of "numerous girls and women," the trial court judge's finding as to what was likely to confuse was "nothing but a surmise, a conjecture, a guess," noting that "neither the trial judge nor any member of this court is (or resembles) a teen-age girl or the mother or sister of such a girl." *Id.* at 976–77.

31. No. CV-83-C-5021-NE (N.D. Ala. filed Jan. 11, 1983). The case ultimately settled before trial. See Francis E. McGovern & E. Allan Lind, *The Discovery Survey*, Law & Contemp. Probs., Autumn 1988, at 41.

in person by neutral third parties, thus replacing interrogatories and depositions. It resulted in substantial savings in both time and cost.

## B. Surveys Used to Help Assess Expert Acceptance in the Wake of Daubert

Scientists who offer expert testimony at trial typically present their own opinions. These opinions may or may not be representative of the opinions of the scientific community at large. In deciding whether to admit such testimony, courts applying the *Frye* test must determine whether the science being offered is generally accepted by the relevant scientific community. Under *Daubert* as well, a relevant factor used to decide admissibility is the extent to which the theory or technique has received widespread acceptance. Properly conducted surveys can provide a useful way to gauge acceptance, and courts recently have been offered assistance from surveys that allegedly gauge relevant scientific opinion. As with any scientific research, the usefulness of the information obtained from a survey depends on the quality of research design. Several critical factors have emerged that have limited the value of some of these surveys: problems in defining the relevant target population and identifying an appropriate sampling frame, response rates that raise questions about the representativeness of the results, and a failure to ask questions that assess opinions on the relevant issue.

Courts deciding on the admissibility of polygraph tests have considered results from several surveys of purported experts. Surveys offered as providing evidence of relevant scientific opinion have tested respondents from several populations: (1) professional polygraph examiners,<sup>32</sup> (2) psychophysologists (members of the Society for Psychophysiological Research),<sup>33</sup> and (3) distinguished psychologists (Fellows of the Division of General Psychology of the American Psychological Association).<sup>34</sup> Respondents in the first group expressed substantial confidence in the scientific accuracy of polygraph testing, and those in the third group expressed substantial doubts about it. Respondents in the second group were asked the same question across three surveys that differed in other aspects of their methodology (e.g., when testing occurred and what the response rate was). Although over 60% of those questioned in two of the three surveys characterized the polygraph as a useful diagnostic tool, one of the surveys was conducted in 1982 and the more recent survey, published in 1984, achieved only a 30% response rate. The third

32. See plaintiff's survey described in Meyers v. Arcudi, 947 F. Supp. 581, 588 (D. Conn. 1996).

33. Susan L. Amato & Charles R. Honts, *What Do Psychophysiologists Think About Polygraph Tests? A Survey of the Membership of SPR*, 31 Psychophysiology S22 [abstract]; Gallup Organization, *Survey of Members of the Society for Psychological Research Concerning Their Opinions of Polygraph Test Interpretation*, 13 Polygraph 153 (1984); William G. Iacono & David T. Lykken, *The Validity of the Lie Detector: Two Surveys of Scientific Opinion*, 82 J. Applied Psychol. 426 (1997).

34. Iacono & Lykken, *supra* note 33.

survey, also conducted in 1984, achieved a response rate of 90% and found that only 44% of respondents viewed the polygraph as a useful diagnostic tool. On the basis of these inconsistent reactions from the several surveys, courts have determined that the polygraph has failed to achieve general acceptance in the scientific community.<sup>35</sup> In addition, however, courts have criticized the relevance of the population surveyed by proponents of the polygraph. For example, in *Meyers v. Arcudi* the court noted that the survey offered by proponents of the polygraph was a survey of “practitioners who estimated the accuracy of the control question technique [of polygraph testing] to be between 86% and 100%.”<sup>36</sup> The court rejected the conclusions from this survey on the basis of a determination that the population surveyed was not the relevant scientific community, noting that “many of them . . . do not even possess advanced degrees and are not trained in the scientific method.”<sup>37</sup>

The link between specialized expertise and self-interest poses a dilemma in defining the relevant scientific population. As the court in *United States v. Orians* recognized, “The acceptance in the scientific community depends in large part on how the relevant scientific community is defined.”<sup>38</sup> In rejecting the defendants’ urging that the court consider as relevant only psychophysicologists whose work is dedicated in large part to polygraph research, the court noted that *Daubert* “does not require the court to limit its inquiry to those individuals that base their livelihood on the acceptance of the relevant scientific theory. These individuals are often too close to the science and have a stake in its acceptance; i.e., their livelihood depends in part on the acceptance of the method.”<sup>39</sup>

To be relevant to a *Frye* or *Daubert* inquiry on general acceptance, the questions asked in a survey of experts should assess opinions on the quality of the scientific theory and methodology, rather than asking whether or not the instrument should be used in a legal setting. Thus, a survey in which 60% of respondents agreed that the polygraph is “a useful diagnostic tool when considered with other available information,” 1% viewed it as sufficiently reliable to be the sole determinant, and the remainder thought it entitled to little or no weight, failed to assess the relevant issue. As the court in *United States v. Cordoba* noted, because “useful” and “other available information” could have many meanings, “there is little wonder why [the response chosen by the majority of respondents] was most frequently selected.”<sup>40</sup>

35. *United States v. Scheffer*, 523 U.S. 303, 309 (1998); *United States v. Bishop*, 64 F. Supp. 2d 1149 (D. Utah 1999); *Meyers v. Arcudi*, 947 F. Supp. 581, 588 (D. Conn. 1996); *United States v. Varoudakis*, 48 Fed. R. Evid. Serv. 1187 (D. Mass. 1998).

36. *Meyers v. Arcudi*, 947 F. Supp. at 588.

37. *Id.*

38. 9 F. Supp. 2d 1168, 1173 (D. Ariz. 1998).

39. *Id.*

40. 991 F. Supp. 1199 (C.D. Cal. 1998), *aff’d*, 194 F.3d 1053 (9th Cir. 1999).

A similar flaw occurred in a survey conducted by experts opposed to the use of the polygraph in trial proceedings. Survey respondents were asked whether they would advocate that courts admit into evidence the outcome of a polygraph test.<sup>41</sup> That question calls for more than an assessment of the accuracy of the polygraph, and thus does not appropriately limit expert opinion to issues within the expert's competence, that is, to the accuracy of the information provided by the test results. The survey also asked whether respondents agreed that the control question technique, the most common form of polygraph test, is accurate at least 85% of the time in real-life applications for guilty and innocent subjects.<sup>42</sup> Although polygraph proponents frequently claim an accuracy level of 85%, it is up to the courts to decide what accuracy level would be required to justify admissibility. A better approach would be to ask survey respondents to estimate the level of accuracy they believe the test is likely to produce.<sup>43</sup>

Surveys of experts are no substitute for an evaluation of whether the testimony an expert witness is offering will assist the trier of fact. Nonetheless, courts can use an assessment of opinion in the relevant scientific community to aid in determining whether a particular expert is proposing to use methods that would be rejected by a representative group of experts to arrive at the opinion the expert will offer. Properly conducted surveys can provide an economical way to collect and present information on scientific consensus and dissensus.

### C. Surveys Used to Help Assess Community Standards: *Atkins v. Virginia*

In *Atkins v. Virginia*,<sup>44</sup> the U.S. Supreme Court determined that the Eighth Amendment's prohibition of "cruel and unusual punishment" forbids the execution of mentally retarded persons.<sup>45</sup> Following the interpretation advanced in *Trop v. Dulles*<sup>46</sup> that "The Amendment must draw its meaning from the evolving standards of decency that mark the progress of a maturing society,"<sup>47</sup> the Court examined a variety of sources, including legislative judgments and public opinion polls, to find that a national consensus had developed barring such executions.<sup>48</sup>

41. See Iacono & Lykken, *supra* note 33, at 430, tbl. 2 (1997).

42. *Id.*

43. At least two assessments should be made: an estimate of the accuracy for guilty subjects and an estimate of the accuracy for innocent subjects.

44. 536 U.S. 304, 322 (2002).

45. Although some groups have recently moved away from the term "mental retardation" in response to concerns that the term may have pejorative connotations, mental retardation was the name used for the condition at issue in *Atkins* and it continues to be employed in federal laws, in cases determining eligibility for the death penalty, and as a diagnosis by the medical profession.

46. 356 U.S. 86 (1958).

47. *Id.* at 101.

48. *Atkins*, 536 U.S. at 313–16.

In a vigorous dissent, Chief Justice Rehnquist objected to the use of the polls, arguing that legislative judgments and jury decisions should be the sole indicators of national opinion. He also objected to the particular polls cited in the majority opinion, identifying what he viewed as serious methodological weaknesses.

The Court has struggled since *Furman v. Georgia*<sup>49</sup> to develop an adequate way to measure public standards regarding the application of the death penalty to specific categories of cases. In relying primarily on surveys of state legislative actions, the Court has ignored the forces that influence whether an issue emerges on a legislative agenda, and the strong influence of powerful minorities on legislative actions.<sup>50</sup> Moreover, the various members of the Court have disagreed about whether states without any death penalty should be included in the count of states that bar the execution of a particular category of defendant.

The Court has sometimes considered jury verdicts in assessing public standards. In *Coker v. Georgia*,<sup>51</sup> the Court forbade the imposition of the death penalty for rape. Citing *Gregg v. Georgia*<sup>52</sup> for the proposition that “[t]he jury . . . is a significant and reliable objective index of contemporary values because it is so directly involved,” the Court noted that “in the vast majority of cases [of rape in Georgia], at least 9 out of 10, juries have not imposed the death sentence.”<sup>53</sup> In *Atkins*, Chief Justice Rehnquist complained about the absence of jury verdict data.<sup>54</sup> Had such data been available, however, they would have been irrelevant because a “survey” of the jurors who have served in such cases would constitute a biased sample of the public. A potential juror unwilling to impose the death penalty on a mentally retarded person would have been ineligible to serve in a capital case involving a mentally retarded defendant because the juror would not have been able to promise during voir dire that he or she would be willing to listen to the evidence and impose the death penalty if the evidence warranted it. Thus, the death-qualified jury in such a case would be composed only of representatives from that subset of citizens willing to execute a mentally retarded defendant, an unrepresentative and systematically biased sample.

Public opinion surveys can provide an important supplementary source of information about contemporary values.<sup>55</sup> The Court in *Atkins* was presented with data from 27 different polls and surveys,<sup>56</sup> 8 of them national and 19 statewide.

49. 408 U.S. 238 (1972).

50. See *Stanford v. Kentucky*, 492 U.S. 361 (1989), abrogated by *Roper v. Simmons*, 543 U.S. 551 (2005).

51. 433 U.S. 584, 596 (1977).

52. 428 U.S. 153, 181 (1976).

53. *Coker v. Georgia*, 433 U.S. at 596.

54. See *Atkins*, 536 U.S. at 323 (Rehnquist, C.J., dissenting).

55. See *id.* at 316 n.21 (“[T]heir consistency with the legislative evidence lends further support to our conclusion that there is a consensus”).

56. The quality of any poll or survey depends on the methodology used, which should be fully visible to the court and the opposing party. See Section VII, *infra*.

The information on the polling data appeared in an amicus brief filed by the American Association on Mental Retardation.<sup>57</sup> Respondents were asked in various ways how they felt about imposing the death penalty on a mentally retarded defendant. In each poll, a majority of respondents expressed opposition to executing the mentally retarded. Chief Justice Rehnquist noted two weaknesses reflected in the data presented to the Court. First, almost no information was provided about the target populations from which the samples were drawn or the methodology of sample selection and data collection. Although further information was available on at least some of the surveys (e.g., the nationwide telephone survey of 1000 voters conducted in 1993 by the Tarrance Group used a sample based on voter turnout in the last three presidential elections), that information apparently was not part of the court record. This omission violates accepted reporting standards in survey research, and the information is needed if the decisionmaker is to intelligently evaluate the quality of the survey. Its absence in this instance occurred because the survey information was obtained from secondary sources.

A second objection raised by Chief Justice Rehnquist was that the wording of some of the questions required respondents to say merely whether they favored or were opposed to the use of the death penalty when the defendant is mentally retarded. It is unclear how a respondent who favors execution of a mentally retarded defendant only in a rare case would respond to that question. Some of the questions, however, did ask whether the respondent felt that it was never appropriate to execute the mentally retarded or whether it was appropriate in some circumstances.<sup>58</sup> In responses to these questions as well, a majority of respondents said that they found the execution of mentally retarded persons unacceptable under any circumstances. The critical point is that despite variations in wording of questions, the year in which the poll was conducted, who conducted it, where it was conducted, and how it was carried out, a majority of respondents (between 56% and 83%) expressed opposition to executing mentally retarded defendants. The Court thus was presented with a consistent set of findings, providing striking reinforcement for the *Atkins* majority's legislative analysis. Opinion poll data and legislative decisions have different strengths and weaknesses as indicators of contemporary values. The value of a multiple-measure approach is that it avoids a potentially misleading reliance on a single source or measure.

57. The data appear as an appendix to the Opinion of Chief Justice Rehnquist in *Atkins*.

58. Appendix to the Opinion of Chief Justice Rehnquist in *Atkins*. "Some people feel that there is nothing wrong with imposing the death penalty on persons who are mentally retarded, depending on the circumstances. Others feel that the death penalty should never be imposed on persons who are mentally retarded under any circumstances. Which of these views comes closest to your own?" The Tarrance Group, Death Penalty Poll, Q. 9 (Mar. 1993), citing Samuel R. Gross, *Update: American Public Opinion on the Death Penalty—It's Getting Personal*, 83 Cornell L. Rev. 1448, 1467 (1998).

## D. A Comparison of Survey Evidence and Individual Testimony

To illustrate the value of a survey, it is useful to compare the information that can be obtained from a competently done survey with the information obtained by other means. A survey is presented by a survey expert who testifies about the responses of a substantial number of individuals who have been selected according to an explicit sampling plan and asked the same set of questions by interviewers who were not told who sponsored the survey or what answers were predicted or preferred. Although parties presumably are not obliged to present a survey conducted in anticipation of litigation by a nontestifying expert if it produced unfavorable results,<sup>59</sup> the court can and should scrutinize the method of respondent selection for any survey that is presented.

A party using a nonsurvey method generally identifies several witnesses who testify about their own characteristics, experiences, or impressions. Although the party has no obligation to select these witnesses in any particular way or to report on how they were chosen, the party is not likely to select witnesses whose attributes conflict with the party's interests. The witnesses who testify are aware of the parties involved in the case and have discussed the case before testifying.

Although surveys are not the only means of demonstrating particular facts, presenting the results of a well-done survey through the testimony of an expert is an efficient way to inform the trier of fact about a large and representative group of potential witnesses. In some cases, courts have described surveys as the most direct form of evidence that can be offered.<sup>60</sup> Indeed, several courts have drawn negative inferences from the absence of a survey, taking the position that failure to undertake a survey may strongly suggest that a properly done survey would not support the plaintiff's position.<sup>61</sup>

59. *In re FedEx Ground Package System*, 2007 U.S. Dist. LEXIS 27086 (N.D. Ind. April 10, 2007); *Loctite Corp. v. National Starch & Chem. Corp.*, 516 F. Supp. 190, 205 (S.D.N.Y. 1981) (distinguishing between surveys conducted in anticipation of litigation and surveys conducted for non-litigation purposes which cannot be reproduced because of the passage of time, concluding that parties should not be compelled to introduce the former at trial, but may be required to provide the latter).

60. See, e.g., *Morrison Entm't Group v. Nintendo of Am.*, 56 Fed. App'x. 782, 785 (9th Cir. Cal. 2003).

61. *Ortho Pharm. Corp. v. Cosprophar, Inc.*, 32 F.3d 690, 695 (2d Cir. 1994); *Henri's Food Prods. Co. v. Kraft, Inc.*, 717 F.2d 352, 357 (7th Cir. 1983); *Medici Classics Productions LLC v. Medici Group LLC*, 590 F. Supp. 2d 548, 556 (S.D.N.Y. 2008); *Citigroup v. City Holding Co.*, 2003 U.S. Dist. LEXIS 1845 (S.D.N.Y. Feb. 10, 2003); *Chum Ltd. v. Lisowski*, 198 F. Supp. 2d 530 (S.D.N.Y. 2002).

## II. Purpose and Design of the Survey

### A. Was the Survey Designed to Address Relevant Questions?

The report describing the results of a survey should include a statement describing the purpose or purposes of the survey. One indication that a survey offers probative evidence is that it was designed to collect information relevant to the legal controversy (e.g., to estimate damages in an antitrust suit or to assess consumer confusion in a trademark case). Surveys not conducted specifically in preparation for, or in response to, litigation may provide important information,<sup>62</sup> but they frequently ask irrelevant questions<sup>63</sup> or select inappropriate samples of respondents for study.<sup>64</sup> Nonetheless, surveys do not always achieve their stated goals. Thus, the content and execution of a survey must be scrutinized whether or not the survey was designed to provide relevant data on the issue before the court.<sup>65</sup> Moreover, if a survey was not designed for purposes of litigation, one source of bias is less likely: The party presenting the survey is less likely to have designed and constructed the survey to provide evidence supporting its side of the issue in controversy.

62. See, e.g., *Wright v. Jeep Corp.*, 547 F. Supp. 871, 874 (E.D. Mich. 1982). Indeed, as courts increasingly have been faced with scientific issues, parties have requested in a number of recent cases that the courts compel production of research data and testimony by unretained experts. The circumstances under which an unretained expert can be compelled to testify or to disclose research data and opinions, as well as the extent of disclosure that can be required when the research conducted by the expert has a bearing on the issues in the case, are the subject of considerable current debate. See, e.g., Joe S. Cecil, *Judicially Compelled Disclosure of Research Data*, 1 Cts. Health Sci. & L. 434 (1991); Richard L. Marcus, *Discovery Along the Litigation/Science Interface*, 57 Brook. L. Rev. 381, 393–428 (1991); see also *Court-Ordered Disclosure of Academic Research: A Clash of Values of Science and Law*, Law & Contemp. Probs., Summer 1996, at 1.

63. See *Loctite Corp. v. National Starch & Chem. Corp.*, 516 F. Supp. 190, 206 (S.D.N.Y. 1981) (marketing surveys conducted before litigation were designed to test for brand awareness, while the “single issue at hand . . . [was] whether consumers understood the term ‘Super Glue’ to designate glue from a single source”).

64. In *Craig v. Boren*, 429 U.S. 190 (1976), the state unsuccessfully attempted to use its annual roadside survey of the blood alcohol level, drinking habits, and preferences of drivers to justify prohibiting the sale of 3.2% beer to males under the age of 21 and to females under the age of 18. The data were biased because it was likely that the male would be driving if both the male and female occupants of the car had been drinking. As pointed out in 2 Joseph L. Gastwirth, *Statistical Reasoning in Law and Public Policy: Tort Law, Evidence, and Health* 527 (1988), the roadside survey would have provided more relevant data if all occupants of the cars had been included in the survey (and if the type and amount of alcohol most recently consumed had been requested so that the consumption of 3.2% beer could have been isolated).

65. See *Merisant Co. v. McNeil Nutritionals, LLC*, 242 F.R.D. 315 (E.D. Pa. 2007).

## B. Was Participation in the Design, Administration, and Interpretation of the Survey Appropriately Controlled to Ensure the Objectivity of the Survey?

An early handbook for judges recommended that survey interviews be “conducted independently of the attorneys in the case.”<sup>66</sup> Some courts interpreted this to mean that any evidence of attorney participation is objectionable.<sup>67</sup> A better interpretation is that the attorney should have no part in carrying out the survey.<sup>68</sup> However, some attorney involvement in the survey design is necessary to ensure that relevant questions are directed to a relevant population.<sup>69</sup> The 2009 amendments to Federal Rule of Civil Procedure 26(a)(2)<sup>70</sup> no longer allow an inquiry into the nature of communications between attorneys and experts, and so the role of attorneys in constructing surveys may become less apparent. The key issues for the trier of fact concerning the design of the survey are the objectivity and relevance of the questions on the survey and the appropriateness of the definition of the population used to guide sample selection. These aspects of the survey are visible to the trier of fact and can be judged on their quality, irrespective of who suggested them. In contrast, the interviews themselves are not directly visible, and any potential bias is minimized by having interviewers and respondents blind to the purpose and sponsorship of the survey and by excluding attorneys from any part in conducting interviews and tabulating results.<sup>71</sup>

66. Judicial Conference of the United States, Handbook of Recommended Procedures for the Trial of Protracted Cases 75 (1960).

67. See, e.g., Boehringer Ingelheim G.m.b.H. v. Pharmadyne Lab., 532 F. Supp. 1040, 1058 (D.N.J. 1980).

68. Upjohn Co. v. American Home Prods. Corp., No. 1-95-CV-237, 1996 U.S. Dist. LEXIS 8049, at \*42 (W.D. Mich. Apr. 5, 1996) (objection that “counsel reviewed the design of the survey carries little force with this Court because [opposing party] has not identified any flaw in the survey that might be attributed to counsel’s assistance”). For cases in which attorney participation was linked to significant flaws in the survey design, see Johnson v. Big Lots Stores, Inc., No. 04-321, 2008 U.S. Dist. LEXIS 35316, at \*20 (E.D. La. April 29, 2008); United States v. Southern Indiana Gas & Elec. Co., 258 F. Supp. 2d 884, 894 (S.D. Ind. 2003); Gibson v. County of Riverside, 181 F. Supp. 2d 1057, 1069 (C.D. Cal. 2002).

69. See 6 J. Thomas McCarthy, McCarthy on Trademarks and Unfair Competition § 32:166 (4th ed. 2003).

70. [www.uscourts.gov/News/TheThirdBranch/10-11-01/Rules\\_Recommendations\\_Take\\_Effect\\_December\\_1\\_2010.aspx](http://www.uscourts.gov/News/TheThirdBranch/10-11-01/Rules_Recommendations_Take_Effect_December_1_2010.aspx).

71. Gibson, 181 F. Supp. 2d at 1068.

### *C. Are the Experts Who Designed, Conducted, or Analyzed the Survey Appropriately Skilled and Experienced?*

Experts prepared to design, conduct, and analyze a survey generally should have graduate training in psychology (especially social, cognitive, or consumer psychology), sociology, political science, marketing, communication sciences, statistics, or a related discipline; that training should include courses in survey research methods, sampling, measurement, interviewing, and statistics. In some cases, professional experience in teaching or conducting and publishing survey research may provide the requisite background. In all cases, the expert must demonstrate an understanding of foundational, current, and best practices in survey methodology, including sampling,<sup>72</sup> instrument design (questionnaire and interview construction), and statistical analysis.<sup>73</sup> Publication in peer-reviewed journals, authored books, fellowship status in professional organizations, faculty appointments, consulting experience, research grants, and membership on scientific advisory panels for government agencies or private foundations are indications of a professional's area and level of expertise. In addition, some surveys involving highly technical subject matter (e.g., the particular preferences of electrical engineers for various pieces of electrical equipment and the bases for those preferences) or special populations (e.g., developmentally disabled adults with limited cognitive skills) may require experts to have some further specialized knowledge. Under these conditions, the survey expert also should be able to demonstrate sufficient familiarity with the topic or population (or assistance from an individual on the research team with suitable expertise) to design a survey instrument that will communicate clearly with relevant respondents.

### *D. Are the Experts Who Will Testify About Surveys Conducted by Others Appropriately Skilled and Experienced?*

Parties often call on an expert to testify about a survey conducted by someone else. The secondary expert's role is to offer support for a survey commissioned by the party who calls the expert, to critique a survey presented by the opposing party, or to introduce findings or conclusions from a survey not conducted in preparation for litigation or by any of the parties to the litigation. The trial court should take into account the exact issue that the expert seeks to testify about and the nature of the expert's field of expertise.<sup>74</sup> The secondary expert who gives an opinion

72. The one exception is that sampling expertise would be unnecessary if the survey were administered to all members of the relevant population. See, e.g., McGovern & Lind, *supra* note 31.

73. If survey expertise is being provided by several experts, a single expert may have general familiarity but not special expertise in all these areas.

74. See Margaret A. Berger, The Admissibility of Expert Testimony, Section III.A, in this manual.

about the adequacy and interpretation of a survey not only should have general skills and experience with surveys and be familiar with all of the issues addressed in this reference guide, but also should demonstrate familiarity with the following properties of the survey being discussed:

1. Purpose of the survey;
2. Survey methodology,<sup>75</sup> including
  - a. the target population,
  - b. the sampling design used in conducting the survey,
  - c. the survey instrument (questionnaire or interview schedule), and
  - d. (for interview surveys) interviewer training and instruction;
3. Results, including rates and patterns of missing data; and
4. Statistical analyses used to interpret the results.

### III. Population Definition and Sampling

#### *A. Was an Appropriate Universe or Population Identified?*

One of the first steps in designing a survey or in deciding whether an existing survey is relevant is to identify the target population (or universe).<sup>76</sup> The target population consists of all elements (i.e., individuals or other units) whose characteristics or perceptions the survey is intended to represent. Thus, in trademark litigation, the relevant population in some disputes may include all prospective and past purchasers of the plaintiff's goods or services and all prospective and past purchasers of the defendant's goods or services. Similarly, the population for a discovery survey may include all potential plaintiffs or all employees who worked for Company A between two specific dates. In a community survey designed to provide evidence for a motion for a change of venue, the relevant population consists of all jury-eligible citizens in the community in which the trial is to take place.<sup>77</sup>

75. See *A & M Records, Inc. v. Napster, Inc.*, 2000 U.S. Dist. LEXIS 20668 (N.D. Cal. Aug. 10, 2000) (holding that expert could not attest credibly that the surveys upon which he relied conformed to accepted survey principles because of his minimal role in overseeing the administration of the survey and limited expert report).

76. Identification of the proper target population or universe is recognized uniformly as a key element in the development of a survey. See, e.g., Judicial Conference of the U.S., *supra* note 66; MCL 4th, *supra* note 16, § 11.493; see also 3 McCarthy, *supra* note 69, § 32:166; Council of Am. Survey Res. Orgs., *Code of Standards and Ethics for Survey Research* § III.A.3 (2010).

77. A second relevant population may consist of jury-eligible citizens in the community where the party would like to see the trial moved. By questioning citizens in both communities, the survey can test whether moving the trial is likely to reduce the level of animosity toward the party requesting the change of venue. See *United States v. Haldeman*, 559 F.2d 31, 140, 151, app. A at 176–79 (D.C. Cir. 1976) (court denied change of venue over the strong objection of Judge MacKinnon, who cited survey evidence that Washington, D.C., residents were substantially more likely to conclude, before

The definition of the relevant population is crucial because there may be systematic differences in the responses of members of the population and nonmembers. For example, consumers who are prospective purchasers may know more about the product category than consumers who are not considering making a purchase.

The universe must be defined carefully. For example, a commercial for a toy or breakfast cereal may be aimed at children, who in turn influence their parents' purchases. If a survey assessing the commercial's tendency to mislead were conducted based on a sample from the target population of prospective and actual adult purchasers, it would exclude a crucial relevant population. The appropriate population in this instance would include children as well as parents.<sup>78</sup>

## *B. Did the Sampling Frame Approximate the Population?*

The target population consists of all the individuals or units that the researcher would like to study. The sampling frame is the source (or sources) from which the sample actually is drawn. The surveyor's job generally is easier if a complete list of every eligible member of the population is available (e.g., all plaintiffs in a discovery survey), so that the sampling frame lists the identity of all members of the target population. Frequently, however, the target population includes members who are inaccessible or who cannot be identified in advance. As a result, reasonable compromises are sometimes required in developing the sampling frame. The survey report should contain (1) a description of the target population, (2) a description of the sampling frame from which the sample is to be drawn, (3) a discussion of the difference between the target population and the sampling frame, and, importantly, (4) an evaluation of the likely consequences of that difference.

A survey that provides information about a wholly irrelevant population is itself irrelevant.<sup>79</sup> Courts are likely to exclude the survey or accord it little

trial, that the defendants were guilty); *see also* People v. Venegas, 31 Cal. Rptr. 2d 114, 117 (Cal. Ct. App. 1994) (change of venue denied because defendant failed to show that the defendant would face a less hostile jury in a different court).

78. *See, e.g.*, Warner Bros., Inc. v. Gay Toys, Inc., 658 F.2d 76 (2d Cir. 1981) (surveying children users of the product rather than parent purchasers). Children and some other populations create special challenges for researchers. For example, very young children should not be asked about sponsorship or licensing, concepts that are foreign to them. Concepts, as well as wording, should be age appropriate.

79. A survey aimed at assessing how persons in the trade respond to an advertisement should be conducted on a sample of persons in the trade and not on a sample of consumers. *See* Home Box Office v. Showtime/The Movie Channel, 665 F. Supp. 1079, 1083 (S.D.N.Y.), *aff'd in part and vacated in part*, 832 F.2d 1311 (2d Cir. 1987); J & J Snack Food Corp. v. Earthgrains Co., 220 F. Supp. 2d 358, 371–72 (N.J. 2002). *But see* Lon Tai Shing Co. v. Koch + Lowy, No. 90-C4464, 1990 U.S. Dist. LEXIS 19123, at \*50 (S.D.N.Y. Dec. 14, 1990), in which the judge was willing to find likelihood of consumer confusion from a survey of lighting store salespersons questioned by a survey researcher posing as a customer. The court was persuaded that the salespersons who were misstating the source

weight.<sup>80</sup> Thus, when the plaintiff submitted the results of a survey to prove that the green color of its fishing rod had acquired a secondary meaning, the court gave the survey little weight in part because the survey solicited the views of fishing rod dealers rather than consumers.<sup>81</sup> More commonly, however, the sampling frame and the target population have some overlap, but the overlap is imperfect: The sampling frame excludes part of the target population, that is, it is underinclusive, or the sampling frame includes individuals who are not members of the target population, that is, it is overinclusive relative to the target population. Coverage error is the term used to describe inconsistencies between a sampling frame and a target population. If the coverage is underinclusive, the survey's value depends on the proportion of the target population that has been excluded from the sampling frame and the extent to which the excluded population is likely to respond differently from the included population. Thus, a survey of spectators and participants at running events would be sampling a sophisticated subset of those likely to purchase running shoes. Because this subset probably would consist of the consumers most knowledgeable about the trade dress used by companies that sell running shoes, a survey based on this sampling frame would be likely to substantially overrepresent the strength of a particular design as a trademark, and the extent of that overrepresentation would be unknown and not susceptible to any reasonable estimation.<sup>82</sup>

Similarly, in a survey designed to project demand for cellular phones, the assumption that businesses would be the primary users of cellular service led surveyors to exclude potential nonbusiness users from the survey. The Federal Communications Commission (FCC) found the assumption unwarranted and concluded that the research was flawed, in part because of this underinclusive coverage.<sup>83</sup> With the growth in individual cell phone use over time, noncoverage error would be an even greater problem for this survey today.

of the lamp, whether consciously or not, must have believed reasonably that the consuming public would be likely to rely on the salespersons' inaccurate statements about the name of the company that manufactured the lamp they were selling.

80. See *Wells Fargo & Co. v. WhenU.com, Inc.*, 293 F. Supp. 2d 734 (E.D. Mich. 2003).

81. See *R.L. Winston Rod Co. v. Sage Mfg. Co.*, 838 F. Supp. 1396, 1401–02 (D. Mont. 1993).

82. See *Brooks Shoe Mfg. Co. v. Suave Shoe Corp.*, 533 F. Supp. 75, 80 (S.D. Fla. 1981), *aff'd*, 716 F.2d 854 (11th Cir. 1983); *see also* *Hodgdon Power Co. v. Alliant Techsystems, Inc.*, 512 F. Supp. 2d 1178 (D. Kan. 2007) (excluding survey on gunpowder brands distributed at plaintiff's promotional booth at a shooting tournament); *Winning Ways, Inc. v. Holloway Sportswear, Inc.*, 913 F. Supp. 1454, 1467 (D. Kan. 1996) (survey flawed in failing to include sporting goods customers who constituted a major portion of customers). *But see* *Thomas & Betts Corp. v. Panduit Corp.*, 138 F.3d 277, 294–95 (7th Cir. 1998) (survey of store personnel admissible because relevant market included both distributors and ultimate purchasers).

83. See *Gencom, Inc.*, 56 Rad. Reg. 2d (P&F) 1597, 1604 (1984). This position was affirmed on appeal. *See Gencom, Inc. v. FCC*, 832 F.2d 171, 186 (D.C. Cir. 1987); *see also* *Beacon Mut. Ins. Co. v. Onebeacon Ins. Corp.*, 376 F. Supp. 2d 251, 261 (D.R.I. 2005) (sample included only defendant's insurance agents and lack of confusion among those agents was "nonstartling").

In some cases, it is difficult to determine whether a sampling frame that omits some members of the population distorts the results of the survey and, if so, the extent and likely direction of the bias. For example, a trademark survey was designed to test the likelihood of confusing an analgesic currently on the market with a new product that was similar in appearance.<sup>84</sup> The plaintiff's survey included only respondents who had used the plaintiff's analgesic, and the court found that the target population should have included users of other analgesics, "so that the full range of potential customers for whom plaintiff and defendants would compete could be studied."<sup>85</sup> In this instance, it is unclear whether users of the plaintiff's product would be more or less likely to be confused than users of the defendants' product or users of a third analgesic.<sup>86</sup>

An overinclusive sampling frame generally presents less of a problem for interpretation than does an underinclusive sampling frame.<sup>87</sup> If the survey expert can demonstrate that a sufficiently large (and representative) subset of respondents in the survey was drawn from the appropriate sampling frame, the responses obtained from that subset can be examined, and inferences about the relevant population can be drawn based on that subset.<sup>88</sup> If the relevant subset cannot be identified, however, an overbroad sampling frame will reduce the value of the survey.<sup>89</sup> If the sampling frame does not include important groups in the target population, there is generally no way to know how the unrepresented members of the target population would have responded.<sup>90</sup>

84. See *American Home Prods. Corp. v. Barr Lab., Inc.*, 656 F. Supp. 1058 (D.N.J.), *aff'd*, 834 F.2d 368 (3d Cir. 1987).

85. *Id.* at 1070.

86. See also *Craig v. Boren*, 429 U.S. 190 (1976).

87. See *Schwab v. Philip Morris USA, Inc.* 449 F. Supp. 2d 992, 1134–35 (E.D.N.Y. 2006) ("Studies evaluating broadly the beliefs of low tar smokers generally are relevant to the beliefs of 'light' smokers more specifically.").

88. See *National Football League Props. Inc. v. Wichita Falls Sportswear, Inc.* 532 F. Supp. 651, 657–58 (W.D. Wash. 1982).

89. See *Leelanau Wine Cellars, Ltd. v. Black & Red, Inc.*, 502 F.3d 504, 518 (6th Cir. 2007) (lower court was correct in giving little weight to survey with overbroad universe); *Big Dog Motorcycles, L.L.C. v. Big Dog Holdings, Inc.*, 402 F. Supp. 2d 1312, 1334 (D. Kan. 2005) (universe composed of prospective purchasers of all t-shirts and caps overinclusive for evaluating reactions of buyers likely to purchase merchandise at motorcycle dealerships). See also *Schieffelin & Co. v. Jack Co. of Boca*, 850 F. Supp. 232, 246 (S.D.N.Y. 1994).

90. See, e.g., *Amstar Corp. v. Domino's Pizza, Inc.*, 615 F.2d 252, 263–64 (5th Cir. 1980) (court found both plaintiff's and defendant's surveys substantially defective for a systematic failure to include parts of the relevant population); *Scott Fetzer Co. v. House of Vacuums, Inc.*, 381 F.3d 477 (5th Cir. 2004) (universe drawn from plaintiff's customer list underinclusive and likely to differ in their familiarity with plaintiff's marketing and distribution techniques).

### C. Does the Sample Approximate the Relevant Characteristics of the Population?

Identification of a survey population must be followed by selection of a sample that accurately represents that population.<sup>91</sup> The use of probability sampling techniques maximizes both the representativeness of the survey results and the ability to assess the accuracy of estimates obtained from the survey.

Probability samples range from simple random samples to complex multistage sampling designs that use stratification, clustering of population elements into various groupings, or both. In all forms of probability sampling, each element in the relevant population has a known, nonzero probability of being included in the sample.<sup>92</sup> In simple random sampling, the most basic type of probability sampling, every element in the population has a known, equal probability of being included in the sample, and all possible samples of a given size are equally likely to be selected.<sup>93</sup> Other probability sampling techniques include (1) stratified random sampling, in which the researcher subdivides the population into mutually exclusive and exhaustive subpopulations, or strata, and then randomly selects samples from within these strata; and (2) cluster sampling, in which elements are sampled in groups or clusters, rather than on an individual basis.<sup>94</sup> Note that selection probabilities do not need to be the same for all population elements; however, if the probabilities are unequal, compensatory adjustments should be made in the analysis.

Probability sampling offers two important advantages over other types of sampling. First, the sample can provide an unbiased estimate that summarizes the responses of all persons in the population from which the sample was drawn; that is, the expected value of the sample estimate is the population value being estimated. Second, the researcher can calculate a confidence interval that describes explicitly how reliable the sample estimate of the population is likely to be. If the sample is unbiased, the difference between the estimate and the exact value is called the sampling error.<sup>95</sup> Thus, suppose a survey collected responses from a simple random sample of 400 dentists selected from the population of all dentists

91. MCL 4th, *supra* note 16, § 11.493. See also David H. Kaye & David A. Freedman, Reference Guide on Statistics, Section II.B, in this manual.

92. The exception is that population elements omitted from the sampling frame have a zero probability of being sampled.

93. Systematic sampling, in which every *n*th unit in the population is sampled and the starting point is selected randomly, fulfills the first of these conditions. It does not fulfill the second, because no systematic sample can include elements adjacent to one another on the list of population members from which the sample is drawn. Except in unusual situations when periodicities occur, systematic samples and simple random samples generally produce the same results. Thomas Piazza, *Fundamentals of Applied Sampling*, in *Handbook of Survey Research*, *supra* note 1, at 139, 145.

94. *Id.* at 139, 150–63.

95. See David H. Kaye & David A. Freedman, *supra* note 91, Glossary, for a definition of sampling error.

licensed to practice in the United States and found that 80, or 20%, of them mistakenly believed that a new toothpaste, Goldgate, was manufactured by the makers of Colgate. A survey expert could properly compute a confidence interval around the 20% estimate obtained from this sample. If the survey were repeated a large number of times, and a 95% confidence interval was computed each time, 95% of the confidence intervals would include the actual percentage of dentists in the entire population who would believe that Goldgate was manufactured by the makers of Colgate.<sup>96</sup> In this example, the margin of error is  $\pm 4\%$ , and so the confidence interval is the range between 16% and 24%, that is, the estimate (20%) plus or minus 4%.

All sample surveys produce estimates of population values, not exact measures of those values. Strictly speaking, the margin of error associated with the sample estimate assumes probability sampling. Assuming a probability sample, a confidence interval describes how stable the mean response in the sample is likely to be. The width of the confidence interval depends on three primary characteristics:

1. Size of the sample (the larger the sample, the narrower the interval);
2. Variability of the response being measured; and
3. Confidence level the researcher wants to have.<sup>97</sup>

Traditionally, scientists adopt the 95% level of confidence, which means that if 100 samples of the same size were drawn, the confidence interval expected for at least 95 of the samples would be expected to include the true population value.<sup>98</sup>

Stratified probability sampling can be used to obtain more precise response estimates by using what is known about characteristics of the population that are likely to be associated with the response being measured. Suppose, for example, we anticipated that more-experienced and less-experienced dentists might respond differently to Goldgate toothpaste, and we had information on the year in which each dentist in the population began practicing. By dividing the population of dentists into more- and less-experienced strata (e.g., in practice 15 years or more versus in practice less than 15 years) and then randomly sampling within experience stratum, we would be able to ensure that the sample contained precisely

96. Actually, because survey interviewers would be unable to locate some dentists and some dentists would be unwilling to participate in the survey, technically the population to which this sample would be projectable would be all dentists with current addresses who would be willing to participate in the survey if they were asked. The expert should be prepared to discuss possible sources of bias due to, for example, an address list that is not current.

97. When the sample design does not use a simple random sample, the confidence interval will be affected.

98. To increase the likelihood that the confidence interval contains the actual population value (e.g., from 95% to 99%) without increasing the sample size, the width of the confidence interval can be expanded. An increase in the confidence interval brings an increase in the confidence level. For further discussion of confidence intervals, see David H. Kaye & David A. Freedman, Reference Guide on Statistics, Section IV.A, in this manual.

proportionate representation from each stratum, in this case, more- and less-experienced dentists. That is, if 60% of dentists were in practice 15 years or more, we could select 60% of the sample from the more-experienced stratum and 40% from the less-experienced stratum and be sure that the sample would have proportionate representation from each stratum, reducing the likely sampling error.<sup>99</sup>

In proportionate stratified probability sampling, as in simple random sampling, each individual member of the population has an equal chance of being selected. Stratified probability sampling can also disproportionately sample from different strata, a procedure that will produce more precise estimates if some strata are more heterogeneous than others on the measure of interest.<sup>100</sup> Disproportionate sampling may also be used to enable the survey to provide separate estimates for particular subgroups. With disproportionate sampling, sampling weights must be used in the analysis to accurately describe the characteristics of the population as a whole.

Although probability sample surveys often are conducted in organizational settings and are the recommended sampling approach in academic and government publications on surveys, probability sample surveys can be expensive when in-person interviews are required, the target population is dispersed widely, or members of the target population are rare. A majority of the consumer surveys conducted for Lanham Act litigation present results from nonprobability convenience samples.<sup>101</sup> They are admitted into evidence based on the argument that nonprobability sampling is used widely in marketing research and that “results of these studies are used by major American companies in making decisions of considerable consequence.”<sup>102</sup> Nonetheless, when respondents are not selected randomly from the relevant population, the expert should be prepared to justify the method used to select respondents. Special precautions are required to reduce the likelihood of biased samples.<sup>103</sup> In addition, quantitative values computed from such samples (e.g., percentage of respondents indicating confusion) should be viewed as rough

99. See *Pharmacia Corp. v. Alcon Lab.*, 201 F. Supp. 2d 335, 365 (D.N.J. 2002).

100. Robert M. Groves et al., *Survey Methodology, Stratification and Stratified Sampling*, 106–18 (2004).

101. Jacob Jacoby & Amy H. Handlin, *Non-Probability Sampling Designs for Litigation Surveys*, 81 Trademark Rep. 169, 173 (1991). For probability surveys conducted in trademark cases, see James Burrough, Ltd. v. Sign of Beefeater, Inc., 540 F.2d 266 (7th Cir. 1976); Nightlight Systems, Inc., v. Nite Lights Franchise Sys., 2007 U.S. Dist. LEXIS 95565 (N.C. Ga. July 17, 2007); National Football League Props., Inc. v. Wichita Falls Sportswear, Inc., 532 F. Supp. 651 (W.D. Wash. 1982).

102. National Football League Props., Inc. v. New Jersey Giants, Inc., 637 F. Supp. 507, 515 (D.N.J. 1986). A survey of members of the Council of American Survey Research Organizations, the national trade association for commercial survey research firms in the United States, revealed that 95% of the in-person independent contacts in studies done in 1985 took place in malls or shopping centers. Jacoby & Handlin, *supra* note 101, at 172–73, 176. More recently, surveys conducted over the Internet have been administered to samples of respondents drawn from panels of volunteers; *see infra* Section IV.G.4 for a discussion of online surveys. Although panel members may be randomly selected from the panel population to complete the survey, the panel population itself is not usually the product of a random selection process.

103. *See infra* Sections III.D–E.

indicators rather than as precise quantitative estimates.<sup>104</sup> Confidence intervals technically should not be computed, although if the calculation shows a wide interval, that may be a useful indication of the limited value of the estimate.

### *D. What Is the Evidence That Nonresponse Did Not Bias the Results of the Survey?*

Even when a sample is drawn randomly from a complete list of elements in the target population, responses or measures may be obtained on only part of the selected sample. If this lack of response is distributed randomly, valid inferences about the population can be drawn with assurance using the measures obtained from the available elements in the sample. The difficulty is that nonresponse often is not random, so that, for example, persons who are single typically have three times the “not at home” rate in U.S. Census Bureau surveys as do family members.<sup>105</sup> Efforts to increase response rates include making several attempts to contact potential respondents, sending advance letters,<sup>106</sup> and providing financial or nonmonetary incentives for participating in the survey.<sup>107</sup>

The key to evaluating the effect of nonresponse in a survey is to determine as much as possible the extent to which nonrespondents differ from the respondents in the nature of the responses they would provide if they were present in the sample. That is, the difficult question to address is the extent to which nonresponse has biased the pattern of responses by undermining the representativeness of the sample and, if it has, the direction of that bias. It is incumbent on the expert presenting the survey results to analyze the level and sources of nonresponse, and to assess how that nonresponse is likely to have affected the results. On some occasions, it may be possible to anticipate systematic patterns of nonresponse. For example, a survey that targets a population of professionals may encounter difficulty in obtaining the same level of participation from individuals with high-volume practices that can be obtained from those with lower-volume practices. To enable the researcher to assess whether response rate varies with the volume of practice, it may be possible to identify in advance potential respondents

104. The court in *Kinetic Concept, Inc. v. Bluesky Medical Corp.*, 2006 U.S. Dist. LEXIS 60187, \*14 (W.D. Tex. Aug. 11, 2006), found the plaintiff's survey using a nonprobability sample to be admissible and permitted the plaintiff's expert to present results from a survey using a convenience sample. The court then assisted the jury by providing an instruction on the differences between probability and convenience samples and the estimates obtained from each.

105. 2 Gastwirth, *supra* note 64, at 501. This volume contains a useful discussion of sampling, along with a set of examples. *Id.* at 467.

106. Edith De Leeuw et al., *The Influence of Advance Letters on Response in Telephone Surveys: A Meta-analysis*, 71 Pub. Op. Q. 413 (2007) (advance letters effective in increasing response rates in telephone as well as mail and face-to-face surveys).

107. Erica Ryu et al., *Survey Incentives: Cash vs. In-kind; Face-to-Face vs. Mail; Response Rate vs. Nonresponse Error*, 18 Int'l J. Pub. Op. Res. 89 (2005).

with varying years of experience. Even if it is not possible to know in advance the level of experience of each potential member in the target population and to design a sampling plan that will produce representative samples at each level of experience, the survey itself can include questions about volume of practice that will permit the expert to assess how experience level may have affected the pattern of results.<sup>108</sup>

Although high response rates (i.e., 80% or higher)<sup>109</sup> are desirable because they generally eliminate the need to address the issue of potential bias from nonresponse,<sup>110</sup> such high response rates are increasingly difficult to achieve. Survey nonresponse rates have risen substantially in recent years, along with the costs of obtaining responses, and so the issue of nonresponse has attracted substantial attention from survey researchers.<sup>111</sup> Researchers have developed a variety of approaches to adjust for nonresponse, including weighting obtained responses in proportion to known demographic characteristics of the target population, comparing the pattern of responses from early and late responders to mail surveys, or the pattern of responses from easy-to-reach and hard-to-reach responders in telephone surveys, and imputing estimated responses to nonrespondents based on known characteristics of those who have responded. All of these techniques can only approximate the response patterns that would have been obtained if nonrespondents had responded. Nonetheless, they are useful for testing the robustness of the findings based on estimates obtained from the simple aggregation of answers to questions given by responders.

To assess the general impact of the lower response rates, researchers have conducted comparison studies evaluating the results obtained from surveys with

108. In *People v. Williams*, *supra* note 22, a published survey of experts in eyewitness research was used to show general acceptance of various eyewitness phenomena. See Saul Kassin et al., *On the "General Acceptance" of Eyewitness Testimony Research: A New Survey of the Experts*, 56 Am. Psychologist 405 (2001). The survey included questions on the publication activity of respondents and compared the responses of those with high and low research productivity. Productivity levels in the respondent sample suggested that respondents constituted a blue ribbon group of leading researchers. *Williams*, 830 N.Y.S.2d at 457 n.16. See also *Pharmacia Corp. v. Alcon Lab., Inc.*, 201 F. Supp. 2d 335 (D.N.J. 2002).

109. Note that methods of computing response rates vary. For example, although response rate can be generally defined as the number of complete interviews with reporting units divided by the number of eligible reporting units in the sample, decisions on how to treat partial completions and how to estimate the eligibility of nonrespondents can produce differences in measures of response rate. E.g., American Association of Public Opinion Research, Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys (rev. 2008), available at [www.Aapor.org/uploads/Standard\\_Definitions\\_07-08\\_Final.pdf](http://www.Aapor.org/uploads/Standard_Definitions_07-08_Final.pdf).

110. Office of Management and Budget, Standards and Guidelines for Statistical Surveys (Sept. 2006), Guideline 1.3.4: Plan for a nonresponse bias analysis if the expected unit response rate is below 80%. See *Albert v. Zabin*, 2009 Mass. App. Unpub. LEXIS 572 (July 14, 2009) reversing summary judgment that had excluded surveys with response rates of 27% and 31% based on a thoughtful analysis of measures taken to assess potential nonresponse bias.

111. E.g., Richard Curtin et al., *Changes in Telephone Survey Nonresponse Over the Past Quarter Century*, 69 Pub. Op. Q. 87 (2005); Survey Nonresponse (Robert M. Groves et al. eds., 2002).

varying response rates.<sup>112</sup> Contrary to earlier assumptions, surprisingly comparable results have been obtained in many surveys with varying response rates, suggesting that surveys may achieve reasonable estimates even with relatively low response rates. The key is whether nonresponse is associated with systematic differences in response that cannot be adequately modeled or assessed.

Determining whether the level of nonresponse in a survey seriously impairs inferences drawn from the results of a survey generally requires an analysis of the determinants of nonresponse. For example, even a survey with a high response rate may seriously underrepresent some portions of the population, such as the unemployed or the poor. If a general population sample is used to chart changes in the proportion of the population that knows someone with HIV, the survey would underestimate the population value if some groups more likely to know someone with HIV (e.g., intravenous drug users) are underrepresented in the sample. The survey expert should be prepared to provide evidence on the potential impact of nonresponse on the survey results.

In surveys that include sensitive or difficult questions, particularly surveys that are self-administered, some respondents may refuse to provide answers or may provide incomplete answers (i.e., item rather than unit nonresponse).<sup>113</sup> To assess the impact of nonresponse to a particular question, the survey expert should analyze the differences between those who answered and those who did not answer. Procedures to address the problem of missing data include recontacting respondents to obtain the missing answers and using the respondent's other answers to predict the missing response (i.e., imputation).<sup>114</sup>

### *E. What Procedures Were Used to Reduce the Likelihood of a Biased Sample?*

If it is impractical for a survey researcher to sample randomly from the entire target population, the researcher still can apply probability sampling to some aspects of respondent selection to reduce the likelihood of biased selection. For example, in many studies the target population consists of all consumers or purchasers of a product. Because it is impractical to randomly sample from that population, research is often conducted in shopping malls where some members of the target population may not shop. Mall locations, however, can be sampled randomly from a list of possible mall sites. By administering the survey at several different

112. E.g., Daniel M. Merkle & Murray Edelman, *Nonresponse in Exit Polls: A Comprehensive Analysis*, in *Survey Nonresponse*, *supra* note 111, at 243–57 (finding minimal nonresponse error associated with refusals to participate in in-person exit polls); see also Jon A. Krosnick, *Survey Research*, 50 Ann. Rev. Psychol. 537 (1999).

113. See Roger Tourangeau et al., *The Psychology of Survey Response* (2000).

114. See Paul D. Allison, *Missing Data*, in *Handbook of Survey Research*, *supra* note 1, at 630; see also *Survey Nonresponse*, *supra* note 111.

malls, the expert can test for and report on any differences observed across sites. To the extent that similar results are obtained in different locations using different onsite interview operations, it is less likely that idiosyncrasies of sample selection or administration can account for the results.<sup>115</sup> Similarly, because the characteristics of persons visiting a shopping center vary by day of the week and time of day, bias in sampling can be reduced if the survey design calls for sampling time segments as well as mall locations.<sup>116</sup>

In mall intercept surveys, the organization that manages the onsite interview facility generally employs recruiters who approach potential survey respondents in the mall and ascertain if they are qualified and willing to participate in the survey. If a potential respondent agrees to answer the questions and meets the specified criteria, he or she is escorted to the facility where the survey interview takes place. If recruiters are free to approach potential respondents without controls on how an individual is to be selected for screening, shoppers who spend more time in the mall are more likely to be approached than shoppers who visit the mall only briefly. Moreover, recruiters naturally prefer to approach friendly looking potential respondents, so that it is more likely that certain types of individuals will be selected. These potential biases in selection can be reduced by providing appropriate selection instructions and training recruiters effectively. Training that reduces the interviewer's discretion in selecting a potential respondent is likely to reduce bias in selection, as are instructions to approach every *n*th person entering the facility through a particular door.<sup>117</sup>

## *F. What Precautions Were Taken to Ensure That Only Qualified Respondents Were Included in the Survey?*

In a carefully executed survey, each potential respondent is questioned or measured on the attributes that determine his or her eligibility to participate in the survey. Thus, the initial questions screen potential respondents to determine if they are members of the target population of the survey (e.g., Is she at least 14 years old? Does she own a dog? Does she live within 10 miles?). The screening questions must be drafted so that they do not appeal to or deter specific groups within the target population, or convey information that will influence the respondent's

115. Note, however, that differences in results across sites may arise from genuine differences in respondents across geographic locations or from a failure to administer the survey consistently across sites.

116. Seymour Sudman, *Improving the Quality of Shopping Center Sampling*, 17 J. Marketing Res. 423 (1980).

117. In the end, even if malls are randomly sampled and shoppers are randomly selected within malls, results from mall surveys technically can be used to generalize only to the population of mall shoppers. The ability of the mall sample to describe the likely response pattern of the broader relevant population will depend on the extent to which a substantial segment of the relevant population (1) is not found in malls and (2) would respond differently to the interview.

answers on the main survey. For example, if respondents must be prospective and recent purchasers of Sunshine orange juice in a trademark survey designed to assess consumer confusion with Sun Time orange juice, potential respondents might be asked to name the brands of orange juice they have purchased recently or expect to purchase in the next 6 months. They should not be asked specifically if they recently have purchased, or expect to purchase, Sunshine orange juice, because this may affect their responses on the survey either by implying who is conducting the survey or by supplying them with a brand name that otherwise would not occur to them.

The content of a screening questionnaire (or screener) can also set the context for the questions that follow. In *Pfizer, Inc. v. Astra Pharmaceutical Products, Inc.*,<sup>118</sup> physicians were asked a screening question to determine whether they prescribed particular drugs. The survey question that followed the screener asked “Thinking of the practice of cardiovascular medicine, what first comes to mind when you hear the letters XL?” The court found that the screener conditioned the physicians to respond with the name of a drug rather than a condition (long-acting).<sup>119</sup>

The criteria for determining whether to include a potential respondent in the survey should be objective and clearly conveyed, preferably using written instructions addressed to those who administer the screening questions. These instructions and the completed screening questionnaire should be made available to the court and the opposing party along with the interview form for each respondent.

## IV. Survey Questions and Structure

### *A. Were Questions on the Survey Framed to Be Clear, Precise, and Unbiased?*

Although it seems obvious that questions on a survey should be clear and precise, phrasing questions to reach that goal is often difficult. Even questions that appear clear can convey unexpected meanings and ambiguities to potential respondents. For example, the question “What is the average number of days each week you have butter?” appears to be straightforward. Yet some respondents wondered whether margarine counted as butter, and when the question was revised to include the introductory phrase “not including margarine,” the reported frequency of butter use dropped dramatically.<sup>120</sup>

118. 858 F. Supp. 1305, 1321 & n.13 (S.D.N.Y. 1994).

119. *Id.* at 1321.

120. Floyd J. Fowler, Jr., *How Unclear Terms Affect Survey Data*, 56 Pub. Op. Q. 218, 225–26 (1992).

When unclear questions are included in a survey, they may threaten the validity of the survey by systematically distorting responses if respondents are misled in a particular direction, or by inflating random error if respondents guess because they do not understand the question.<sup>121</sup> If the crucial question is sufficiently ambiguous or unclear, it may be the basis for rejecting the survey. For example, a survey was designed to assess community sentiment that would warrant a change of venue in trying a case for damages sustained when a hotel skywalk collapsed.<sup>122</sup> The court found that the question “Based on what you have heard, read or seen, do you believe that in the current compensatory damage trials, the defendants, such as the contractors, designers, owners, and operators of the Hyatt Hotel, should be punished?” could neither be correctly understood nor easily answered.<sup>123</sup> The court noted that the phrase “compensatory damages,” although well-defined for attorneys, was unlikely to be meaningful for laypersons.<sup>124</sup>

A variety of pretest activities may be used to improve the clarity of communication with respondents. Focus groups can be used to find out how the survey population thinks about an issue, facilitating the construction of clear and understandable questions. Cognitive interviewing, which includes a combination of think-aloud and verbal probing techniques, may be used for questionnaire evaluation.<sup>125</sup> Pilot studies involving a dress rehearsal for the main survey can also detect potential problems.

Texts on survey research generally recommend pretests as a way to increase the likelihood that questions are clear and unambiguous,<sup>126</sup> and some courts have recognized the value of pretests.<sup>127</sup> In many pretests or pilot tests,<sup>128</sup> the proposed survey is administered to a small sample (usually between 25 and 75)<sup>129</sup> of the

121. See *id.* at 219.

122. Firestone v. Crown Ctr. Redevelopment Corp., 693 S.W.2d 99 (Mo. 1985) (en banc).

123. See *id.* at 102, 103.

124. See *id.* at 103. When there is any question about whether some respondents will understand a particular term or phrase, the term or phrase should be defined explicitly.

125. Gordon B. Willis et al., *Is the Bandwagon Headed to the Methodological Promised Land? Evaluating the Utility of Cognitive Interviewing Techniques*, in Cognitive and Survey Research 136 (Monroe G. Sirken et al. eds., 1999). See also Tourangeau et al., *supra* note 113, at 326–27.

126. See Jon A. Krosnick & Stanley Presser, *Questions and Questionnaire Design*, in Handbook of Survey Research, *supra* note 1, at 294 (“No matter how closely a questionnaire follows recommendations based on best practices, it is likely to benefit from pretesting. . .”). See also Jean M. Converse & Stanley Presser, Survey Questions: Handcrafting the Standardized Questionnaire 51 (1986); Fred W. Morgan, *Judicial Standards for Survey Research: An Update and Guidelines*, 54 J. Marketing 59, 64 (1990).

127. See e.g., Zippo Mfg. Co. v. Rogers Imports, Inc., 216 F. Supp. 670 (S.D.N.Y. 1963); Scott v. City of New York, 591 F. Supp. 2d 554, 560 (S.D.N.Y. 2008) (“[S]urvey went through multiple pretests in order to insure its usefulness and statistical validity.”).

128. The terms *pretest* and *pilot test* are sometimes used interchangeably to describe pilot work done in the planning stages of research. When they are distinguished, the difference is that a pretest tests the questionnaire, whereas a pilot test generally tests proposed collection procedures as well.

129. Converse & Presser, *supra* note 126, at 69. Converse and Presser suggest that a pretest with 25 respondents is appropriate when the survey uses professional interviewers.

same type of respondents who would be eligible to participate in the full-scale survey. The interviewers observe the respondents for any difficulties they may have with the questions and probe for the source of any such difficulties so that the questions can be rephrased if confusion or other difficulties arise.<sup>130</sup> Attorneys who commission surveys for litigation sometimes are reluctant to approve pilot work or to reveal that pilot work has taken place because they are concerned that if a pretest leads to revised wording of the questions, the trier of fact may believe that the survey has been manipulated and is biased or unfair. A more appropriate reaction is to recognize that pilot work is a standard and valuable way to improve the quality of a survey<sup>131</sup> and to anticipate that it often results in word changes that increase clarity and correct misunderstandings. Thus, changes may indicate informed survey construction rather than flawed survey design.<sup>132</sup>

## *B. Were Some Respondents Likely to Have No Opinion? If So, What Steps Were Taken to Reduce Guessing?*

Some survey respondents may have no opinion on an issue under investigation, either because they have never thought about it before or because the question mistakenly assumes a familiarity with the issue. For example, survey respondents may not have noticed that the commercial they are being questioned about guaranteed the quality of the product being advertised and thus they may have no opinion on the kind of guarantee it indicated. Likewise, in an employee survey, respondents may not be familiar with the parental leave policy at their company and thus may have no opinion on whether they would consider taking advantage of the parental leave policy if they became parents. The following three alternative question structures will affect how those respondents answer and how their responses are counted.

First, the survey can ask all respondents to answer the question (e.g., “Did you understand the guarantee offered by Clover to be a 1-year guarantee, a 60-day guarantee, or a 30-day guarantee?”). Faced with a direct question, particularly one that provides response alternatives, the respondent obligingly may supply an

130. Methods for testing respondent understanding include concurrent and retrospective think-alouds, in which respondents describe their thinking as they arrive at, or after they have arrived at, an answer, and paraphrasing (asking respondents to restate the question in their own words). Tourangeau et al., *supra* note 113, at 326–27; see also Methods for Testing and Evaluating Survey Questionnaires (Stanley Presser et al. eds., 2004).

131. See OMB Standards and Guidelines for Statistical Survey, *supra* note 110, Standard 1.4, Pre-testing Survey Systems (specifying that to ensure that all components of a survey function as intended, pretests of survey components should be conducted unless those components have previously been successfully fielded); American Association for Public Opinion Research, Best Practices (2011) (“Because it is rarely possible to foresee all the potential misunderstandings or biasing effects of different questions or procedures, it is vital for a well-designed survey operation to include provision for a pretest.”).

132. See *infra* Section VII.B for a discussion of obligations to disclose pilot work.

answer even if (in this example) the respondent did not notice the guarantee (or is unfamiliar with the parental leave policy). Such answers will reflect only what the respondent can glean from the question, or they may reflect pure guessing. The imprecision introduced by this approach will increase with the proportion of respondents who are unfamiliar with the topic at issue.

Second, the survey can use a quasi-filter question to reduce guessing by providing “don’t know” or “no opinion” options as part of the question (e.g., “Did you understand the guarantee offered by Clover to be for more than a year, a year, or less than a year, or don’t you have an opinion?”).<sup>133</sup> By signaling to the respondent that it is appropriate not to have an opinion, the question reduces the demand for an answer and, as a result, the inclination to hazard a guess just to comply. Respondents are more likely to choose a “no opinion” option if it is mentioned explicitly by the interviewer than if it is merely accepted when the respondent spontaneously offers it as a response. The consequence of this change in format is substantial. Studies indicate that, although the relative distribution of the respondents selecting the *listed* choices is unlikely to change dramatically, presentation of an explicit “don’t know” or “no opinion” alternative commonly leads to a 20% to 25% increase in the proportion of respondents selecting that response.<sup>134</sup>

Finally, the survey can include full-filter questions, that is, questions that lay the groundwork for the substantive question by first asking the respondent if he or she has an opinion about the issue or happened to notice the feature that the interviewer is preparing to ask about (e.g., “Based on the commercial you just saw, do you have an opinion about how long Clover stated or implied that its guarantee lasts?”).<sup>135</sup> The interviewer then asks the substantive question only of those respondents who have indicated that they have an opinion on the issue.

Which of these three approaches is used and the way it is used can affect the rate of “no opinion” responses that the substantive question will evoke.<sup>136</sup> Respondents are more likely to say that they do not have an opinion on an issue if a full filter is used than if a quasi-filter is used.<sup>137</sup> However, in maximizing respondent expressions of “no opinion,” full filters may produce an underreporting of opinions. There is some evidence that full-filter questions discourage respondents who actually have opinions from offering them by conveying the implicit suggestion that respondents can avoid difficult followup questions by saying that they have no opinion.<sup>138</sup>

133. Norbert Schwarz & Hans-Jürgen Hippler, *Response Alternatives: The Impact of Their Choice and Presentation Order*, in *Measurement Errors in Surveys* 41, 45–46 (Paul P. Biemer et al. eds., 1991).

134. Howard Schuman & Stanley Presser, Questions and Answers in Attitude Surveys: Experiments on Question Form, Wording and Context 113–46 (1981).

135. See, e.g., Johnson & Johnson–Merck Consumer Pharmas. Co. v. SmithKline Beecham Corp., 960 F.2d 294, 299 (2d Cir. 1992).

136. Considerable research has been conducted on the effects of filters. For a review, see George F. Bishop et al., *Effects of Filter Questions in Public Opinion Surveys*, 47 Pub. Op. Q. 528 (1983).

137. Schwarz & Hippler, *supra* note 133, at 45–46.

138. *Id.* at 46.

In general, then, a survey that uses full filters provides a conservative estimate of the number of respondents holding an opinion, while a survey that uses neither full filters nor quasi-filters may overestimate the number of respondents with opinions, if some respondents offering opinions are guessing. The strategy of including a “no opinion” or “don’t know” response as a quasi-filter avoids both of these extremes. Thus, rather than asking, “Based on the commercial, do you believe that the two products are made in the same way, or are they made differently?”<sup>139</sup> or prefacing the question with a preliminary, “Do you have an opinion, based on the commercial, concerning the way that the two products are made?” the question could be phrased, “Based on the commercial, do you believe that the two products are made in the same way, or that they are made differently, or don’t you have an opinion about the way they are made?”

Recent research on the effects of including a “don’t know” option shows that quasi-filters as well as full filters may discourage a respondent who would be able to provide a meaningful answer from expressing it.<sup>140</sup> The “don’t know” option provides a cue that it is acceptable to avoid the work of trying to provide a more substantive response. Respondents are particularly likely to be attracted to a “don’t know” option when the question is difficult to understand or the respondent is not strongly motivated to carefully report an opinion.<sup>141</sup> One solution that some survey researchers use is to provide respondents with a general instruction not to guess at the beginning of an interview, rather than supplying a “don’t know” or “no opinion” option as part of the options attached to each question.<sup>142</sup> Another approach is to eliminate the “don’t know” option and to add followup questions that measure the strength of the respondent’s opinion.<sup>143</sup>

### *C. Did the Survey Use Open-Ended or Closed-Ended Questions? How Was the Choice in Each Instance Justified?*

The questions that make up a survey instrument may be open-ended, closed-ended, or a combination of both. Open-ended questions require the respondent to formulate and express an answer in his or her own words (e.g., “What was the main point of the commercial?” “Where did you catch the fish you caught

139. The question in the example without the “no opinion” alternative was based on a question rejected by the court in *Coors Brewing Co. v. Anheuser-Busch Cos.*, 802 F. Supp. 965, 972–73 (S.D.N.Y. 1992). See also *Procter & Gamble Pharms., Inc. v. Hoffmann-La Roche, Inc.*, 2006 U.S. Dist. LEXIS 64363 (S.D.N.Y. Sept. 6, 2006).

140. Jon A. Krosnick et al., *The Impact of “No Opinion” Response Options on Data Quality: Non-Attitude Reduction or Invitation to Satisfice?* 66 Pub. Op. Q. 371 (2002).

141. Krosnick & Presser, *supra* note 126, at 284.

142. *Anheuser-Busch, Inc. v. VIP Prods, LLC*, No. 4:08cv0358, 2008 U.S. Dist. LEXIS 82258, at \*6 (E.D. Mo. Oct. 16, 2008).

143. Krosnick & Presser, *supra* note 126, at 285.

in these waters?”<sup>144</sup>). Closed-ended questions provide the respondent with an explicit set of responses from which to choose; the choices may be as simple as *yes* or *no* (e.g., “Is Colby College coeducational?”<sup>145</sup>) or as complex as a range of alternatives (e.g., “The two pain relievers have (1) the same likelihood of causing gastric ulcers; (2) about the same likelihood of causing gastric ulcers; (3) a somewhat different likelihood of causing gastric ulcers; (4) a very different likelihood of causing gastric ulcers; or (5) none of the above.”<sup>146</sup>). When a survey involves in-person interviews, the interviewer may show the respondent these choices on a showcard that lists them.

Open-ended and closed-ended questions may elicit very different responses.<sup>147</sup> Most responses are less likely to be volunteered by respondents who are asked an open-ended question than they are to be chosen by respondents who are presented with a closed-ended question. The response alternatives in a closed-ended question may remind respondents of options that they would not otherwise consider or which simply do not come to mind as easily.<sup>148</sup>

The advantage of open-ended questions is that they give the respondent fewer hints about expected or preferred answers. Precoded responses on a closed-ended question, in addition to reminding respondents of options that they might not otherwise consider,<sup>149</sup> may direct the respondent away from or toward a particular response. For example, a commercial reported that in shampoo tests with more than 900 women, the sponsor’s product received higher ratings than

144. A relevant example from *Wilhoite v. Olin Corp.* is described in McGovern & Lind, *supra* note 31, at 76.

145. Presidents & Trustees of Colby College v. Colby College–N.H., 508 F.2d 804, 809 (1st Cir. 1975).

146. This question is based on one asked in *American Home Products Corp. v. Johnson & Johnson*, 654 F. Supp. 568, 581 (S.D.N.Y. 1987), that was found to be a leading question by the court, primarily because the choices suggested that the respondent had learned about aspirin’s and ibuprofen’s relative likelihood of causing gastric ulcers. In contrast, in *McNeilab, Inc. v. American Home Products Corp.*, 501 F. Supp. 517, 525 (S.D.N.Y. 1980), the court accepted as nonleading the question, “Based only on what the commercial said, would Maximum Strength Anacin contain more pain reliever, the same amount of pain reliever, or less pain reliever than the brand you, yourself, currently use most often?”

147. Howard Schuman & Stanley Presser, *Question Wording as an Independent Variable in Survey Analysis*, 6 Soc. Methods & Res. 151 (1977); Schuman & Presser, *supra* note 134, at 79–112; Converse & Presser, *supra* note 126, at 33.

148. For example, when respondents in one survey were asked, “What is the most important thing for children to learn to prepare them for life?”, 62% picked “to think for themselves” from a list of five options, but only 5% spontaneously offered that answer when the question was open-ended. Schuman & Presser, *supra* note 134, at 104–07. An open-ended question presents the respondent with a free-recall task, whereas a closed-ended question is a recognition task. Recognition tasks in general reveal higher performance levels than recall tasks. Mary M. Smyth et al., *Cognition in Action* 25 (1987). In addition, there is evidence that respondents answering open-ended questions may be less likely to report some information that they would reveal in response to a closed-ended question when that information seems self-evident or irrelevant.

149. Schwarz & Hippler, *supra* note 133, at 43.

other brands.<sup>150</sup> According to a competitor, the commercial deceptively implied that each woman in the test rated more than one shampoo, when in fact each woman rated only one. To test consumer impressions, a survey might have shown the commercial and asked an open-ended question: “How many different brands mentioned in the commercial did each of the 900 women try?”<sup>151</sup> Instead, the survey asked a closed-ended question; respondents were given the choice of “one,” “two,” “three,” “four,” or “five or more.” The fact that four of the five choices in the closed-ended question provided a response that was greater than one implied that the correct answer was probably more than one.<sup>152</sup> Note, however, that the open-ended question also may suggest that the answer is more than one.

By asking “how many different brands,” the question suggests (1) that the viewer should have received some message from the commercial about the number of brands each woman tried and (2) that different brands were tried. Similarly, an open-ended question that asks, “[W]hich company or store do you think puts out this shirt?” indicates to the respondent that the appropriate answer is the name of a company or store. The question would be leading if the respondent would have considered other possibilities (e.g., an individual or Webstore) if the question had not provided the frame of a company or store.<sup>153</sup> Thus, the wording of a question, open-ended or closed-ended, can be leading or non-leading, and the degree of suggestiveness of each question must be considered in evaluating the objectivity of a survey.

Closed-ended questions have some additional potential weaknesses that arise if the choices are not constructed properly. If the respondent is asked to choose one response from among several choices, the response chosen will be meaningful only if the list of choices is exhaustive—that is, if the choices cover all possible answers a respondent might give to the question. If the list of possible choices is incomplete, a respondent may be forced to choose one that does not express his or her opinion.<sup>154</sup> Moreover, if respondents are told explicitly that they are

150. See *Vidal Sassoon, Inc. v. Bristol-Myers Co.*, 661 F.2d 272, 273 (2d Cir. 1981).

151. This was the wording of the closed-ended question in the survey discussed in *Vidal Sassoon*, 661 F.2d at 275–76, without the closed-ended options that were supplied in that survey.

152. Ninety-five percent of the respondents who answered the closed-ended question in the plaintiff's survey said that each woman had tried two or more brands. The open-ended question was never asked. *Vidal Sassoon*, 661 F.2d at 276. Norbert Schwarz, *Assessing Frequency Reports of Mundane Behaviors: Contributions of Cognitive Psychology to Questionnaire Construction*, in *Research Methods in Personality and Social Psychology* 98 (Clyde Hendrick & Margaret S. Clark eds., 1990), suggests that respondents often rely on the range of response alternatives as a frame of reference when they are asked for frequency judgments. See, e.g., Roger Tourangeau & Tom W. Smith, *Asking Sensitive Questions: The Impact of Data Collection Mode, Question Format, and Question Context*, 60 Pub. Op. Q. 275, 292 (1996).

153. *Smith v. Wal-Mart Stores, Inc.*, 537 F. Supp. 2d 1302, 1331–32 (N.D. Ga. 2008).

154. See, e.g., *American Home Prods. Corp. v. Johnson & Johnson*, 654 F. Supp. 568, 581 (S.D.N.Y. 1987).

not limited to the choices presented, most respondents nevertheless will select an answer from among the listed ones.<sup>155</sup>

One form of closed-ended question format that typically produces some distortion is the popular agree/disagree, true/false, or yes/no question. Although this format is appealing because it is easy to write and score these questions and their responses, the format is also seriously problematic. With its simplicity comes acquiescence, “[T]he tendency to endorse any assertion made in a question, regardless of its content,” is a systematic source of bias that has produced an inflation effect of 10% across a number of studies.<sup>156</sup> Only when control groups or control questions are added to the survey design can this question format provide reasonable response estimates.<sup>157</sup>

Although many courts prefer open-ended questions on the ground that they tend to be less leading, the value of any open-ended or closed-ended question depends on the information it conveys in the question and, in the case of closed-ended questions, in the choices provided. Open-ended questions are more appropriate when the survey is attempting to gauge what comes first to a respondent’s mind, but closed-ended questions are more suitable for assessing choices between well-identified options or obtaining ratings on a clear set of alternatives.

#### *D. If Probes Were Used to Clarify Ambiguous or Incomplete Answers, What Steps Were Taken to Ensure That the Probes Were Not Leading and Were Administered in a Consistent Fashion?*

When questions allow respondents to express their opinions in their own words, some of the respondents may give ambiguous or incomplete answers, or may ask for clarification. In such instances, interviewers may be instructed to record any answer that the respondent gives and move on to the next question, or they may be instructed to probe to obtain a more complete response or clarify the meaning of the ambiguous response. They may also be instructed what clarification they can provide. In all of these situations, interviewers should record verbatim both what the respondent says and what the interviewer says in the attempt to get or provide clarification. Failure to record every part of the exchange in the order in which it occurs raises questions about the reliability of the survey, because neither the court nor the opposing party can evaluate whether the probe affected the views expressed by the respondent.

155. See Howard Schuman, *Ordinary Questions, Survey Questions, and Policy Questions*, 50 Pub. Opinion Q. 432, 435–36 (1986).

156. Jon A. Krosnick, *Survey Research*, 50 Ann. Rev. Psychol. 537, 552 (1999).

157. See *infra* Section IV.F.

If the survey is designed to allow for probes, interviewers must be given explicit instructions on when they should probe and what they should say in probing.<sup>158</sup> Standard probes used to draw out all that the respondent has to say (e.g., “Any further thoughts?” “Anything else?” “Can you explain that a little more?” Or “Could you say that another way?”) are relatively innocuous and non-controversial in content, but persistent continued requests for further responses to the same or nearly identical questions may convey the idea to the respondent that he or she has not yet produced the “right” answer.<sup>159</sup> Interviewers should be trained in delivering probes to maintain a professional and neutral relationship with the respondent (as they should during the rest of the interview), which minimizes any sense of passing judgment on the content of the answers offered. Moreover, interviewers should be given explicit instructions on when to probe, so that probes are administered consistently.

A more difficult type of probe to construct and deliver reliably is one that requires a substantive question tailored to the answer given by the respondent. The survey designer must provide sufficient instruction to interviewers so that they avoid giving directive probes that suggest one answer over another. Those instructions, along with all other aspects of interviewer training, should be made available for evaluation by the court and the opposing party.

### *E. What Approach Was Used to Avoid or Measure Potential Order or Context Effects?*

The order in which questions are asked on a survey and the order in which response alternatives are provided in a closed-ended question can influence the answers.<sup>160</sup> For example, although asking a general question before a more specific question on the same topic is unlikely to affect the response to the specific question, reversing the order of the questions may influence responses to the general question. As a rule, then, surveys are less likely to be subject to order effects if the questions move from the general (e.g., “What do you recall being discussed

158. Floyd J. Fowler, Jr. & Thomas W. Mangione, *Standardized Survey Interviewing: Minimizing Interviewer-Related Error* 41–42 (1990).

159. See, e.g., *Johnson & Johnson-Merck Consumer Pharm. Co. v. Rhone-Poulenc Rorer Pharm. Inc.*, 19 F.3d 125, 135 (3d Cir. 1994); *American Home Prods. Corp. v. Procter & Gamble Co.*, 871 F. Supp. 739, 748 (D.N.J. 1994).

160. See Schuman & Presser, *supra* note 134, at 23, 56–74. Krosnick & Presser, *supra* note 126, at 278–81. In *R.J. Reynolds Tobacco Co. v. Loew's Theatres, Inc.*, 511 F. Supp. 867, 875 (S.D.N.Y. 1980), the court recognized the biased structure of a survey that disclosed the tar content of the cigarettes being compared before questioning respondents about their cigarette preferences. Not surprisingly, respondents expressed a preference for the lower tar product. See also *E. & J. Gallo Winery v. Pasatiempos Gallo, S.A.*, 905 F. Supp. 1403, 1409–10 (E.D. Cal. 1994) (court recognized that earlier questions referring to playing cards, board or table games, or party supplies, such as confetti, increased the likelihood that respondents would include these items in answers to the questions that followed).

in the advertisement?”) to the specific (e.g., “Based on your reading of the advertisement, what companies do you think the ad is referring to when it talks about rental trucks that average five miles per gallon?”).<sup>161</sup>

The mode of questioning can influence the form that an order effect takes. When respondents are shown response alternatives visually, as in mail surveys and other self-administered questionnaires or in face-to-face interviews when respondents are shown a card containing response alternatives, they are more likely to select the first choice offered (a primacy effect).<sup>162</sup> In contrast, when response alternatives are presented orally, as in telephone surveys, respondents are more likely to choose the last choice offered (a recency effect).<sup>163</sup> Although these effects are typically small, no general formula is available that can adjust values to correct for order effects, because the size and even the direction of the order effects may depend on the nature of the question being asked and the choices being offered. Moreover, it may be unclear which order is most appropriate. For example, if the respondent is asked to choose between two different products, and there is a tendency for respondents to choose the first product mentioned,<sup>164</sup> which order of presentation will produce the more accurate response?<sup>165</sup> To control for order effects, the order of the questions and the order of the response choices in a survey should be rotated,<sup>166</sup> so that, for example, one-third of the respondents have Product A listed first, one-third of the respondents have Product B listed first, and one-third of the respondents have Product C listed first. If the three different orders<sup>167</sup> are distributed randomly among respondents, no response alternative will have an inflated chance of being selected because of its position, and the average of the three will provide a reasonable estimate of response level.<sup>168</sup>

161. This question was accepted by the court in *U-Haul Int'l, Inc. v. Jartran, Inc.*, 522 F. Supp. 1238, 1249 (D. Ariz. 1981), *aff'd*, 681 F.2d 1159 (9th Cir. 1982).

162. Krosnick & Presser, *supra* note 126, at 280.

163. *Id.*

164. Similarly, candidates in the first position on the ballot tend to attract extra votes. J.M. Miller & Jon A. Krosnick, *The Impact of Candidate Name Order on Election Outcomes*, 62 Pub. Op. Q. 291 (1998).

165. See *Rust Env't & Infrastructure, Inc. v. Teunissen*, 131 F.3d 1210, 1218 (7th Cir. 1997) (survey did not pass muster in part because of failure to incorporate random rotation of corporate names that were the subject of a trademark dispute).

166. See, e.g. *Winning Ways, Inc. v. Holloway Sportswear, Inc.*, 913 F. Supp. 1454, 1465–67 (D. Kan. 1996) (failure to rotate the order in which the jackets were shown to the consumers led to reduced weight for the survey); *Procter & Gamble Pharms., Inc. v. Hoffmann-La Roche, Inc.*, 2006 U.S. Dist. LEXIS 64363, 2006-2 Trade Cas. (CCH) P75465 (S.D.N.Y. Sept. 6, 2006).

167. Actually, there are six possible orders of the three alternatives: ABC, ACB, BAC, BCA, CAB, and CBA. Thus, the optimal survey design would allocate equal numbers of respondents to each of the six possible orders.

168. Although rotation is desirable, many surveys are conducted with no attention to this potential bias. Because it is impossible to know in the abstract whether a particular question suffers much, little, or not at all from an order bias, lack of rotation should not preclude reliance on the answer to the question, but it should reduce the weight given to that answer.

## *F. If the Survey Was Designed to Test a Causal Proposition, Did the Survey Include an Appropriate Control Group or Question?*

Many surveys are designed not simply to describe attitudes or beliefs or reported behaviors, but to determine the source of those attitudes or beliefs or behaviors. That is, the purpose of the survey is to test a causal proposition. For example, how does a trademark or the content of a commercial affect respondents' perceptions or understanding of a product or commercial? Thus, the question is not merely whether consumers hold inaccurate beliefs about Product A, but whether exposure to the commercial misleads the consumer into thinking that Product A is a superior pain reliever. Yet if consumers already believe, before viewing the commercial, that Product A is a superior pain reliever, a survey that simply records consumers' impressions after they view the commercial may reflect those preexisting beliefs rather than impressions produced by the commercial.

Surveys that merely record consumer impressions have a limited ability to answer questions about the origins of those impressions. The difficulty is that the consumer's response to any question on the survey may be the result of information or misinformation from sources other than the trademark the respondent is being shown or the commercial he or she has just watched.<sup>169</sup> In a trademark survey attempting to show secondary meaning, for example, respondents were shown a picture of the stripes used on Mennen stick deodorant and asked, “[W]hich [brand] would you say uses these stripes on their package?”<sup>170</sup> The court recognized that the high percentage of respondents selecting “Mennen” from an array of brand names may have represented “merely a playback of brand share”;<sup>171</sup> that is, respondents asked to give a brand name may guess the one that is most familiar, generally the brand with the largest market share.<sup>172</sup>

Some surveys attempt to reduce the impact of preexisting impressions on respondents' answers by instructing respondents to focus solely on the stimulus as a basis for their answers. Thus, the survey includes a preface (e.g., “based on the commercial you just saw”) or directs the respondent's attention to the mark at issue (e.g., “these stripes on the package”). Such efforts are likely to be only partially successful. It is often difficult for respondents to identify accurately the

169. See, e.g., Procter & Gamble Co. v. Ultreco, Inc., 574 F. Supp. 2d. 339, 351–52 (S.D.N.Y. 2008) (survey was unreliable because it failed to control for the effect of preexisting beliefs).

170. Mennen Co. v. Gillette Co., 565 F. Supp. 648, 652 (S.D.N.Y. 1983), *aff'd*, 742 F.2d 1437 (2d Cir. 1984). To demonstrate secondary meaning, “the [c]ourt must determine whether the mark has been so associated in the mind of consumers with the entity that it identifies that the goods sold by that entity are distinguished by the mark or symbol from goods sold by others.” *Id.*

171. *Id.*

172. See also Upjohn Co. v. American Home Prods. Corp., No. 1-95-CV-237, 1996 U.S. Dist. LEXIS 8049, at \*42–44 (W.D. Mich. Apr. 5, 1996).

source of their impressions.<sup>173</sup> The more routine the idea being examined in the survey (e.g., that the advertised pain reliever is more effective than others on the market; that the mark belongs to the brand with the largest market share), the more likely it is that the respondent's answer is influenced by (1) preexisting impressions; (2) general expectations about what commercials typically say (e.g., the product being advertised is better than its competitors); or (3) guessing, rather than by the actual content of the commercial message or trademark being evaluated.

It is possible to adjust many survey designs so that causal inferences about the effect of a trademark or an allegedly deceptive commercial become clear and unambiguous. By adding one or more appropriate control groups, the survey expert can test directly the influence of the stimulus.<sup>174</sup> In the simplest version of such a survey experiment, respondents are assigned randomly to one of two conditions.<sup>175</sup> For example, respondents assigned to the experimental condition view an allegedly deceptive commercial, and respondents assigned to the control condition either view a commercial that does not contain the allegedly deceptive material or do not view any commercial.<sup>176</sup> Respondents in both the experimental and control groups answer the same set of questions about the allegedly deceptive message. The effect of the commercial's allegedly deceptive message is evaluated by comparing the responses made by the experimental group members with those of the control group members. If 40% of the respondents in the experimental group responded indicating that they received the deceptive message (e.g., the advertised product has fewer calories than its competitor), whereas only 8% of the respondents in the control group gave that response, the difference between 40% and 8% (within the limits of sampling error<sup>177</sup>) can be attributed only to the allegedly deceptive message. Without the control group, it is not possible to determine how much of the 40% is attributable to respondents' preexisting beliefs

173. See Richard E. Nisbett & Timothy D. Wilson, *Telling More Than We Can Know: Verbal Reports on Mental Processes*, 84 Psychol. Rev. 231 (1977).

174. See Shari S. Diamond, *Using Psychology to Control Law: From Deceptive Advertising to Criminal Sentencing*, 13 Law & Hum. Behav. 239, 244–46 (1989); Jacob Jacoby & Constance Small, *Applied Marketing: The FDA Approach to Defining Misleading Advertising*, 39 J. Marketing 65, 68 (1975). See also David H. Kaye & David A. Freedman, Reference Guide on Statistics, Section II.A, in this manual.

175. Random assignment should not be confused with random selection. When respondents are assigned randomly to different treatment groups (e.g., respondents in each group watch a different commercial), the procedure ensures that within the limits of sampling error the two groups of respondents will be equivalent except for the different treatments they receive. Respondents selected for a mall intercept study, and not from a probability sample, may be assigned randomly to different treatment groups. Random selection, in contrast, describes the method of selecting a sample of respondents in a probability sample. See *supra* Section III.C.

176. This alternative commercial could be a “tombstone” advertisement that includes only the name of the product or a more elaborate commercial that does not include the claim at issue.

177. For a discussion of sampling error, see David H. Kaye & David A. Freedman, Reference Guide on Statistics, Section IV.A, in this manual.

or other background noise (e.g., respondents who misunderstand the question or misstate their responses). Both preexisting beliefs and other background noise should have produced similar response levels in the experimental and control groups. In addition, if respondents who viewed the allegedly deceptive commercial respond differently than respondents who viewed the control commercial, the difference cannot be merely the result of a leading question, because both groups answered the same question. The ability to evaluate the effect of the wording of a particular question makes the control group design particularly useful in assessing responses to closed-ended questions,<sup>178</sup> which may encourage guessing or particular responses. Thus, the focus on the response level in a control group design is not on the absolute response level, but on the difference between the response level of the experimental group and that of the control group.<sup>179</sup>

In designing a survey-experiment, the expert should select a stimulus for the control group that shares as many characteristics with the experimental stimulus as possible, with the key exception of the characteristic whose influence is being assessed.<sup>180</sup> Although a survey with an imperfect control group may provide better information than a survey with no control group at all, the choice of an appropriate control group requires some care and should influence the weight that the survey receives. For example, a control stimulus should not be less attractive than the experimental stimulus if the survey is designed to measure how familiar the experimental stimulus is to respondents, because attractiveness may affect perceived familiarity.<sup>181</sup> Nor should the control stimulus share with the experimental stimulus the feature whose impact is being assessed. If, for example, the control stimulus in a case of alleged trademark infringement is itself a likely source of consumer confusion, reactions to the experimental and control stimuli may not

178. The Federal Trade Commission has long recognized the need for some kind of control for closed-ended questions, although it has not specified the type of control that is necessary. See Stouffer Foods Corp., 118 F.T.C. 746, No. 9250, 1994 FTC LEXIS 196, at \*31 (Sept. 26, 1994).

179. See, e.g., Cytosport, Inc. v. Vital Pharms., Inc., 617 F. Supp. 2d 1051, 1075–76 (E.D. Cal. 2009) (net confusion level of 25.4% obtained by subtracting 26.5% in the control group from 51.9% in the test group).

180. See, e.g., Skechers USA, Inc. v. Vans, Inc., No. CV-07-01703, 2007 WL 4181677, at \*8–9 (C.D. Cal. Nov. 20, 2007) (in trade dress infringement case, control stimulus should have retained design elements not at issue); Procter & Gamble Pharms., Inc. v. Hoffman-LaRoche, Inc., No. 06-Civ-0034, 2006 U.S. Dist. LEXIS 64363, at \*87 (S.D.N.Y. Sept. 6, 2006) (in false advertising action, disclaimer was inadequate substitute for appropriate control group).

181. See, e.g., Indianapolis Colts, Inc. v. Metropolitan Baltimore Football Club L.P., 34 F.3d 410, 415–16 (7th Cir. 1994) (court recognized that the name “Baltimore Horses” was less attractive for a sports team than the name “Baltimore Colts.”); see also Reed-Union Corp. v. Turtle Wax, Inc., 77 F.3d 909, 912 (7th Cir. 1996) (court noted that one expert’s choice of a control brand with a well-known corporate source was less appropriate than the opposing expert’s choice of a control brand whose name did not indicate a specific corporate source); Louis Vuitton Malletier v. Dooney & Bourke, Inc., 525 F. Supp. 2d 576, 595 (S.D.N.Y. 2007) (underreporting of background “noise” likely occurred because handbag used as control was quite dissimilar in shape and pattern to both plaintiff and defendant’s bags).

differ because both cause respondents to express the same level of confusion.<sup>182</sup> In an extreme case, an inappropriate control may do nothing more than control for the effect of the nature or wording of the survey questions (e.g., acquiescence).<sup>183</sup> That may not be enough to rule out other explanations for different or similar responses to the experimental and control stimuli. Finally, it may sometimes be appropriate to have more than one control group to assess precisely what is causing the response to the experimental stimulus (e.g., in the case of an allegedly deceptive ad, whether it is a misleading graph or a misleading claim by the announcer; or in the case of allegedly infringing trade dress, whether it is the style of the font used or the coloring of the packaging).

Explicit attention to the value of control groups in trademark and deceptive-advertising litigation is a relatively recent phenomenon, but courts have increasingly come to recognize the central role the control group can play in evaluating claims.<sup>184</sup> A LEXIS search using *Lanham Act* and *control group* revealed only 4 federal district court cases before 1991 in which surveys with control groups were discussed, 16 in the 9 years from 1991 to 1999, and 46 in the 9 years between 2000 and 2008, a rate of growth that far exceeds the growth in Lanham Act litigation. In addition, courts in other cases have described or considered surveys using control group designs without labeling the comparison group a control group.<sup>185</sup> Indeed, one reason why cases involving surveys with control groups may be underrepresented in reported cases is that a survey with a control group produces

182. See, e.g., *Western Publ'g Co. v. Publications Int'l, Ltd.*, No. 94-C-6803, 1995 U.S. Dist. LEXIS 5917, at \*45 (N.D. Ill. May 2, 1995) (court noted that the control product was “arguably more infringing than” the defendant’s product) (emphasis omitted). See also *Classic Foods Int’l Corp. v. Kettle Foods, Inc.*, 2006 U.S. Dist. LEXIS 97200 (C.D. Cal. Mar. 2, 2006); *McNeil-PPC, Inc. v. Merisant Co.*, 2004 U.S. Dist. LEXIS 27733 (D.PR. July 29, 2004).

183. See text accompanying note 156, *supra*.

184. See, e.g., *SmithKline Beecham Consumer Healthcare, L.P. v. Johnson & Johnson-Merck*, 2001 U.S. Dist. LEXIS 7061, at \*37 (S.D.N.Y. June 1, 2001) (survey to assess implied falsity of a commercial not probative in the absence of a control group); *Consumer American Home Prods. Corp. v. Procter & Gamble Co.*, 871 F. Supp. 739, 749 (D.N.J. 1994) (discounting survey results based on failure to control for participants’ preconceived notions); *ConAgra, Inc. v. Geo. A. Hormel & Co.*, 784 F. Supp. 700, 728 (D. Neb. 1992) (“Since no control was used, the . . . study, standing alone, must be significantly discounted.”), *aff’d*, 990 F.2d 368 (8th Cir. 1993).

185. *Indianapolis Colts, Inc. v. Metropolitan Baltimore Football Club L.P.*, No. 94727-C, 1994 U.S. Dist. LEXIS 19277, at \*10–11 (S.D. Ind. June 27, 1994), *aff’d*, 34 F.3d 410 (7th Cir. 1994). In *Indianapolis Colts*, the district court described a survey conducted by the plaintiff’s expert in which half of the interviewees were shown a shirt with the name “Baltimore CFL Colts” on it and half were shown a shirt on which the word “Horses” had been substituted for the word “Colts.” *Id.* The court noted that the comparison of reactions to the horse and colt versions of the shirt made it possible “to determine the impact from the use of the word ‘Colts.’” *Id.* at \*11. See also *Quality Inns Int’l, Inc. v. McDonald’s Corp.*, 695 F. Supp. 198, 218 (D. Md. 1988) (survey revealed confusion between McDonald’s and McSleep, but control survey revealed no confusion between McDonald’s and McTavish). See also *Simon Prop. Group L.P. v. MySimon, Inc.*, 104 F. Supp. 2d 1033 (S.D. Ind. 2000) (court criticized the survey design based on the absence of a control that could show that results were produced by legally relevant confusion).

less ambiguous findings, which may lead to a resolution before a preliminary injunction hearing or trial occurs.

A less common use of control methodology is a control question. Rather than administering a control stimulus to a separate group of respondents, the survey asks all respondents one or more control questions along with the question about the product or service at issue. In a trademark dispute, for example, a survey indicated that 7.2% of respondents believed that “The Mart” and “K-Mart” were owned by the same individuals. The court found no likelihood of confusion based on survey evidence that 5.7% of the respondents also thought that “The Mart” and “King’s Department Store” were owned by the same source.<sup>186</sup>

Similarly, a standard technique used to evaluate whether a brand name is generic is to present survey respondents with a series of product or service names and ask them to indicate in each instance whether they believe the name is a brand name or a common name. By showing that 68% of respondents considered Teflon a brand name (a proportion similar to the 75% of respondents who recognized the acknowledged trademark Jell-O as a brand name, and markedly different from the 13% who thought aspirin was a brand name), the makers of Teflon retained their trademark.<sup>187</sup>

Every measure of opinion or belief in a survey reflects some degree of error. Control groups and, as a second choice, control questions are the most reliable means for assessing response levels against the baseline level of error associated with a particular question.

## *G. What Limitations Are Associated with the Mode of Data Collection Used in the Survey?*

Three primary methods have traditionally been used to collect survey data: (1) in-person interviews, (2) telephone interviews, and (3) mail questionnaires.<sup>188</sup> Recently, in the wake of increasing use of the Internet, researchers have added Web-based surveys to their arsenal of tools. Surveys using in-person and telephone interviews, too, now regularly rely on computerized data collection.<sup>189</sup>

186. S.S. Kresge Co. v. United Factory Outlet, Inc., 598 F.2d 694, 697 (1st Cir. 1979). Note that the aggregate percentages reported here do not reveal how many of the same respondents were confused by both names, an issue that may be relevant in some situations. See Joseph L. Gastwirth, *Reference Guide on Survey Research*, 36 Jurimetrics J. 181, 187–88 (1996) (review essay).

187. E.I. du Pont de Nemours & Co. v. Yoshida Int’l, Inc., 393 F. Supp. 502, 526–27 & n.54 (E.D.N.Y. 1975); see also Donchez v. Coors Brewing Co., 392 F.3d 1211, 1218 (10th Cir. 2004) (respondents evaluated eight brand and generic names in addition to the disputed name). A similar approach is used in assessing secondary meaning.

188. Methods also may be combined, as when the telephone is used to “screen” for eligible respondents, who then are invited to participate in an in-person interview.

189. Wright & Marsden, *supra* note 1, at 13–14.

The interviewer conducting a computer-assisted interview (CAI), whether by telephone (CATI) or face-to-face (CAPI), follows the computer-generated script for the interview and enters the respondent's answers as the interview proceeds. A primary advantage of CATI and other CAI procedures is that skip patterns can be built into the program. If, for example, the respondent answers *yes* when asked whether she has ever been the victim of a burglary, the computer will generate further questions about the burglary; if she answers *no*, the program will automatically skip the followup burglary questions. Interviewer errors in following the skip patterns are therefore avoided, making CAI procedures particularly valuable when the survey involves complex branching and skip patterns.<sup>190</sup> CAI procedures also can be used to control for order effects by having the program rotate the order in which the questions or choices are presented.<sup>191</sup>

Recent innovations in CAI procedures include audio computer-assisted self-interviewing (ACASI) in which the respondent listens to recorded questions over the telephone or reads questions from a computer screen while listening to recorded versions of them through headphones. The respondent then answers verbally or on a keypad. ACASI procedures are particularly useful for collecting sensitive information (e.g., illegal drug use and other HIV risk behavior).<sup>192</sup>

All CAI procedures require additional planning to take advantage of the potential for improvements in data quality. When a CAI protocol is used in a survey presented in litigation, the party offering the survey should supply for inspection the computer program that was used to generate the interviews. Moreover, CAI procedures do not eliminate the need for close monitoring of interviews to ensure that interviewers are accurately reading the questions in the interview protocol and accurately entering the respondent's answers.

The choice of any data collection method for a survey should be justified by its strengths and weaknesses.

### *1. In-person interviews*

Although costly, in-person interviews generally are the preferred method of data collection, especially when visual materials must be shown to the respondent under controlled conditions.<sup>193</sup> When the questions are complex and the interviewers are skilled, in-person interviewing provides the maximum opportunity to

190. Willem E. Saris, *Computer-Assisted Interviewing* 20, 27 (1991).

191. See, e.g., *Intel Corp. v. Advanced Micro Devices, Inc.*, 756 F. Supp. 1292, 1296–97 (N.D. Cal. 1991) (survey designed to test whether the term *386* as applied to a microprocessor was generic used a CATI protocol that tested reactions to five terms presented in rotated order).

192. See, e.g., N. Galai et al., *ACASI Versus Interviewer-Administered Questionnaires for Sensitive Risk Behaviors: Results of a Cross-Over Randomized Trial Among Injection Drug Users* (abstract, 2004), available at <http://gateway.nlm.nih.gov/MeetingAbstracts/ma?f=102280272.html>.

193. A mail survey also can include limited visual materials but cannot exercise control over when and how the respondent views them.

clarify or probe. Unlike a mail survey, both in-person and telephone interviews have the capability to implement complex skip sequences (in which the respondent's answer determines which question will be asked next) and the power to control the order in which the respondent answers the questions. Interviewers also can directly verify who is completing the survey, a check that is unavailable in mail and Web-based surveys. As described *infra* Section V.A, appropriate interviewer training, as well as monitoring of the implementation of interviewing, is necessary if these potential benefits are to be realized. Objections to the use of in-person interviews arise primarily from their high cost or, on occasion, from evidence of inept or biased interviewers. In-person interview quality in recent years has been assisted by technology. Using computer-assisted personal interviewing (CAPI), the interviewer reads the questions off the screen of a laptop computer and then enters responses directly.<sup>194</sup> This support makes it easier to follow complex skip patterns and to promptly submit results via the Internet to the survey center.

## 2. Telephone interviews

Telephone surveys offer a comparatively fast and lower-cost alternative to in-person surveys and are particularly useful when the population is large and geographically dispersed. Telephone interviews (unless supplemented with mailed or e-mailed materials) can be used only when it is unnecessary to show the respondent any visual materials. Thus, an attorney may present the results of a telephone survey of jury-eligible citizens in a motion for a change of venue in order to provide evidence that community prejudice raises a reasonable suspicion of potential jury bias.<sup>195</sup> Similarly, potential confusion between a restaurant called McBagel's and the McDonald's fast-food chain was established in a telephone survey. Over objections from defendant McBagel's that the survey did not show respondents the defendant's print advertisements, the court found likelihood of confusion based on the survey, noting that "by soliciting audio responses[, the telephone survey] was closely related to the radio advertising involved in the case."<sup>196</sup> In contrast, when words are not sufficient because, for example, the survey is assessing reactions to the trade

194. Wright & Marsden, *supra* note 1, at 13.

195. See, e.g., *State v. Baumruk*, 85 S.W.3d 644 (Mo. 2002). (overturning the trial court's decision to ignore a survey that found about 70% of county residents remembered the shooting that led to the trial and that of those who had heard about the shooting, 98% believed that the defendant was either definitely guilty or probably guilty); *State v. Erickstad*, 620 N.W.2d 136, 140 (N.D. 2000) (denying change of venue motion based on media coverage, concluding that "defendants [need to] submit qualified public opinion surveys, other opinion testimony, or any other evidence demonstrating community bias caused by the media coverage"). For a discussion of surveys used in motions for change of venue, see Neal Miller, *Facts, Expert Facts, and Statistics: Descriptive and Experimental Research Methods in Litigation, Part II*, 40 Rutgers L. Rev. 467, 470–74 (1988); National Jury Project, *Jurywork: Systematic Techniques* (2d ed. 2008).

196. *McDonald's Corp. v. McBagel's, Inc.*, 649 F. Supp. 1268, 1278 (S.D.N.Y. 1986).

dress or packaging of a product that is alleged to promote confusion, a telephone survey alone does not offer a suitable vehicle for questioning respondents.<sup>197</sup>

In evaluating the sampling used in a telephone survey, the trier of fact should consider:

1. Whether (when prospective respondents are not business personnel) some form of random-digit dialing<sup>198</sup> was used instead of or to supplement telephone numbers obtained from telephone directories, because a high percentage of all residential telephone numbers in some areas may be unlisted;<sup>199</sup>
2. Whether any attempt was made to include cell phone users, particularly the growing subpopulation of individuals who rely solely on cell phones for telephone services;<sup>200</sup>
3. Whether the sampling procedures required the interviewer to sample within the household or business, instead of allowing the interviewer to administer the survey to any qualified individual who answered the telephone;<sup>201</sup> and
4. Whether interviewers were required to call back multiple times at several different times of the day and on different days to increase the likelihood of contacting individuals or businesses with different schedules.<sup>202</sup>

197. See *Thompson Med. Co. v. Pfizer Inc.*, 753 F.2d 208 (2d Cir. 1985); *Incorporated Publ'g Corp. v. Manhattan Magazine, Inc.*, 616 F. Supp. 370 (S.D.N.Y. 1985), *aff'd without op.*, 788 F.2d 3 (2d Cir. 1986).

198. Random-digit dialing provides coverage of households with both listed and unlisted telephone numbers by generating numbers at random from the sampling frame of all possible telephone numbers. James M. Lepkowski, *Telephone Sampling Methods in the United States*, in *Telephone Survey Methodology* 81–91 (Robert M. Groves et al. eds., 1988).

199. Studies comparing listed and unlisted household characteristics show some important differences. *Id.* at 76.

200. According to a 2009 study, an estimated 26.5% of households cannot be reached by landline surveys, because 2.0% have no phone service and 24.5% have only a cell phone. Stephen J. Blumberg & Julian V. Luke, *Wireless Substitution: Early Release of Estimates Based on the National Health Interview Survey, July–December 2009* (2010), available at <http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201005.pdf>. People who can be reached only by cell phone tend to be younger and are more likely to be African American or Hispanic and less likely to be married or to own their home than individuals reachable on a landline. Although at this point, the effect on estimates from landline-only telephone surveys appears to be minimal on most topics, on some issues (e.g., voter registration) and within the population of young adults, the gap may warrant consideration. Scott Keeter et al., *What's Missing from National RDD Surveys? The Impact of the Growing Cell-Only Population*, Paper presented at the 2007 Conference of AAPOR, May 2007.

201. This is a consideration only if the survey is sampling individuals. If the survey is seeking information on the household, more than one individual may be able to answer questions on behalf of the household.

202. This applied equally to in-person interviews.

Telephone surveys that do not include these procedures may not provide precise measures of the characteristics of a representative sample of respondents, but may be adequate for providing rough approximations. The vulnerability of the survey depends on the information being gathered. More elaborate procedures are advisable for achieving a representative sample of respondents if the survey instrument requests information that is likely to differ for individuals with listed telephone numbers versus individuals with unlisted telephone numbers, individuals rarely at home versus those usually at home, or groups who are more versus less likely to rely exclusively on cell phones.

The report submitted by a survey expert who conducts a telephone survey should specify:

1. The procedures that were used to identify potential respondents, including both the procedures used to select the telephone numbers that were called and the procedures used to identify the qualified individual to question),
2. The number of telephone numbers for which no contact was made; and
3. The number of contacted potential respondents who refused to participate in the survey.<sup>203</sup>

Like CAPI interviewing,<sup>204</sup> computer-assisted telephone interviewing (CATI) facilitates the administration and data entry of large-scale surveys.<sup>205</sup> A computer protocol may be used to generate and dial telephone numbers as well as to guide the interviewer.

### *3. Mail questionnaires*

In general, mail surveys tend to be substantially less costly than both in-person and telephone surveys.<sup>206</sup> Response rates tend to be lower for self-administered mail surveys than for telephone or face-to-face surveys, but higher than for their Web-based equivalents.<sup>207</sup> Procedures that raise response rates include multiple mailings, highly personalized communications, prepaid return envelopes, incentives or gratuities, assurances of confidentiality, first-class outgoing postage, and followup reminders.<sup>208</sup>

203. Additional disclosure and reporting features applicable to surveys in general are described in Section VII.B, *infra*.

204. See text accompanying note 194, *supra*.

205. See Roger Tourangeau et al., *The Psychology of Survey Response* 289 (2000); Saris, *supra* note 190.

206. See Chase H. Harrison, *Mail Surveys and Paper Questionnaires*, in *Handbook of Survey Research*, *supra* note 1, at 498, 499.

207. See Mick Couper et al., *A Comparison of Mail and E-Mail for a Survey of Employees in Federal Statistical Agencies*, 15 J. Official Stat. 39 (1999); Mick Couper, *Web Surveys: A Review of Issues and Approaches* 464, 473 (2001).

208. See, e.g., Richard J. Fox et al., *Mail Survey Response Rate: A Meta-Analysis of Selected Techniques for Inducing Response*, 52 Pub. Op. Q. 467, 482 (1988); Kenneth D. Hopkins & Arlen R.

A mail survey will not produce a high rate of return unless it begins with an accurate and up-to-date list of names and addresses for the target population. Even if the sampling frame is adequate, the sample may be unrepresentative if some individuals are more likely to respond than others. For example, if a survey targets a population that includes individuals with literacy problems, these individuals will tend to be underrepresented. Open-ended questions are generally of limited value on a mail survey because they depend entirely on the respondent to answer fully and do not provide the opportunity to probe or clarify unclear answers. Similarly, if eligibility to answer some questions depends on the respondent's answers to previous questions, such skip sequences may be difficult for some respondents to follow. Finally, because respondents complete mail surveys without supervision, survey personnel are unable to prevent respondents from discussing the questions and answers with others before completing the survey and to control the order in which respondents answer the questions. Although skilled design of questionnaire format, question order, and the appearance of the individual pages of a survey can minimize these problems,<sup>209</sup> if it is crucial to have respondents answer questions in a particular order, a mail survey cannot be depended on to provide adequate data.

#### 4. Internet surveys

A more recent innovation in survey technology is the Internet survey in which potential respondents are contacted and their responses are collected over the Internet. Internet surveys in principle can reduce substantially the cost of reaching potential respondents. Moreover, they offer some of the advantages of in-person interviews by enabling the respondent to view pictures, videos, and lists of response choices on the computer screen during the survey. A further advantage is that whenever a respondent answers questions presented on a computer screen, whether over the Internet or in a dedicated facility, the survey can build in a variety of controls. In contrast to a mail survey in which the respondent can examine and/or answer questions out of order and may mistakenly skip questions, a computer-administered survey can control the order in which the questions are displayed so that the respondent does not see a later question before answering an earlier one and so that the respondent cannot go back to change an answer previously given to an earlier question in light of the questions that follow it. The order of the questions or response options can be rotated easily to control for order effects. In addition, the structure permits the survey to remind, or even require, the respondent to answer a question before the next question is presented. One advantage of computer-administered surveys over interviewer-administered

Gullickson, *Response Rates in Survey Research: A Meta-Analysis of the Effects of Monetary Gratuities*, 61 J. Experimental Educ. 52, 54–57, 59 (1992); Eleanor Singer et al., *Confidentiality Assurances and Response: A Quantitative Review of the Experimental Literature*, 59 Pub. Op. Q. 66, 71 (1995); see generally Don A. Dillman, *Internet Mail and Mixed-Mode Surveys: The Tailored Design Method* (3d ed. 2009).

209. Dilman, *supra* note 208, at 151–94.

surveys is that they eliminate interviewer error because the computer presents the questions and the respondent records her own answers.

Internet surveys do have limitations, and many questions remain about the extent to which those limitations impair the quality of the data they provide. A key potential limitation is that respondents accessible over the Internet may not fairly represent the relevant population whose responses the survey was designed to measure. Although Internet access has not approached the 95% penetration achieved by the telephone, the proportion of individuals with Internet access has grown at a remarkable rate, as has the proportion of individuals who regularly use a computer. For example, according to one estimate, use of the Internet among adults jumped from 22% in 1997 to 60% in 2003.<sup>210</sup> Despite this rapid expansion, a digital divide still exists, so that the “have-nots” are less likely to be represented in surveys that depend on Internet access. The effect of this divide on survey results will depend on the population the survey is attempting to capture. For example, if the target population consists of computer users, any bias from systematic underrepresentation is likely to be minimal. In contrast, if the target population consists of owners of television sets, a proportion of whom may not have Internet access, significant bias is more likely. The trend toward greater access to the Internet is likely to continue, and the issue of underrepresentation may disappear in time. At this point, a party presenting the results of a Web-based survey should be prepared to provide evidence on how coverage limitations may have affected the pattern of survey results.

Even if noncoverage error is not a significant concern, courts evaluating a Web-based survey must still determine whether the sampling approach is adequate. That evaluation will depend on the type of Internet survey involved, because Web-based surveys vary in fundamental ways.

At one extreme is the list-based Web survey. This Web survey is sent to a closed set of potential respondents drawn from a list that consists of the e-mail addresses of the target individuals (e.g., all students at a university or employees at a company where each student or employee has a known e-mail address).

At the other extreme is the self-selected Web survey in which Web users in general, or those who happen to visit a particular Web site, are invited to express their views on a topic and they participate simply by volunteering. Whereas the list-based survey enables the researcher to evaluate response rates and often to assess the representativeness of respondents on a variety of characteristics, the self-selected Web survey provides no information on who actually participates or how representative the participants are. Thus, it is impossible to evaluate nonresponse error or even participation rates. Moreover, participants are very likely to self-select on the basis of the nature of the topic. These self-selected pseudosurveys resemble reader polls published in magazines and do not meet standard criteria for legitimate surveys

210. Jennifer C. Day et al., Computer and Internet Use in the United States: 2003, 8–9 (U.S. Census Bureau 2005).

admissible in court.<sup>211</sup> Occasionally, proponents of such polls tout the large number of respondents as evidence of the weight the results should be given, but the size of the sample cannot cure the likely participation bias in such voluntary polls.<sup>212</sup>

Between these two extremes is a large category of Web-based survey approaches that researchers have developed to address concerns about sampling bias and nonresponse error. For example, some approaches create a large database of potential participants by soliciting volunteers through appeals on well-traveled sites.<sup>213</sup> Based on the demographic data collected from those who respond to the appeals, a sample of these panel members are asked to participate in a particular survey by invitation only. Responses are weighted to reduce selection bias.<sup>214</sup> An expert presenting the results from such a survey should be prepared to explain why the particular weighting approach can be relied upon to achieve that purpose.<sup>215</sup>

Another approach that is more costly uses probability sampling from the initial contact with a potential respondent. Potential participants are initially contacted by telephone using random-digit dialing procedures. Those who lack Internet access are provided with the technology to participate. Members from the panel are then invited to participate in a particular survey, and the researchers know the characteristics of participants and nonparticipants from the initial telephone contact.<sup>216</sup> For all surveys that rely on preselected panels, whether nonrandomly or randomly selected, questions have been raised about panel conditioning (i.e., the effect of having participants in earlier surveys respond to later surveys) and the relatively low rate of response to survey invitations. An expert presenting results from a Web-based survey should be prepared to address these issues and to discuss how they may have affected the results.

Finally, the recent proliferation of Internet surveys has stimulated a growing body of research on the influence of formatting choices in Web surveys. Evidence from this research indicates that formatting decisions can significantly affect the quality of survey responses.<sup>217</sup>

211. See, e.g., Merisant Co. v. McNeil Nutritionals, LLC, 242 F.R.D. 315 (E.D. Pa. 2007) (report on results from AOL “instant poll” excluded).

212. See, e.g., Couper (2001), *supra* note 207, at 480–81 (a self-selected Web survey conducted by the National Geographic Society through its Web site attracted 50,000 responses; a comparison of the Canadian respondents with data from the Canadian General Social Survey telephone survey conducted using random-digit dialing showed marked differences on a variety of response measures).

213. See, e.g., Ecce Panis, Inc. v. Maple Leaf Bakery, Inc. 2007 U.S. Dist. LEXIS 85780 (D. Ariz. Nov. 7, 2007).

214. See, e.g., Philip Morris USA, Inc. v. Otamedia Limited, 2005 U.S. Dist. LEXIS 1259 (S.D.N.Y. Jan. 28, 2005).

215. See, e.g., A&M Records, Inc. v. Napster, Inc. 2000 WL 1170106 (N.D. Cal. Aug. 10, 2000) (court refused to rely on results from Internet panel survey when expert presenting the results showed lack of familiarity with panel construction and weighting methods).

216. See, e.g., Price v. Philip Morris, Inc., 219 Ill. 2d 182, 848 N.E.2d 1 (2005).

217. See, e.g., Mick P. Couper et al., *What They See Is What We Get: Response Options for Web Surveys*, 22 Soc. Sci. Computer Rev. 111 (2004) (comparing order effects with radio button and

A final approach to data collection does not depend on a single mode, but instead involves a mixed-mode approach. By combining modes, the survey design may increase the likelihood that all sampling members of the target population will be contacted. For example, a person without a landline may be reached by mail or e-mail. Similarly, response rates may be increased if members of the target population are more likely to respond to one mode of contact versus another. For example, a person unwilling to be interviewed by phone may respond to a written or e-mail contact. If a mixed-mode approach is used, the questions and structure of the questionnaires are likely to differ across modes, and the expert should be prepared to address the potential impact of mode on the answers obtained.<sup>218</sup>

## V. Surveys Involving Interviewers

### *A. Were the Interviewers Appropriately Selected and Trained?*

A properly defined population or universe, a representative sample, and clear and precise questions can be depended on to produce trustworthy survey results only if “sound interview procedures were followed by competent interviewers.”<sup>219</sup> Properly trained interviewers receive detailed written instructions on everything they are to say to respondents, any stimulus materials they are to use in the survey, and how they are to complete the interview form. These instructions should be made available to the opposing party and to the trier of fact. Thus, interviewers should be told, and the interview form on which answers are recorded should indicate, which responses, if any, are to be read to the respondent. Moreover, interviewers should be instructed to record verbatim the respondent’s answers, to indicate explicitly whenever they repeat a question to the respondent, and to record any statements they make to or supplementary questions they ask the respondent.

Interviewers require training to ensure that they are able to follow directions in administering the survey questions. Some training in general interviewing techniques is required for most interviews (e.g., practice in pausing to give the respondent enough time to answer and practice in resisting invitations to express the interviewer’s beliefs or opinions). Although procedures vary, there is evidence that interviewer performance suffers with less than a day of training in general interviewing skills and techniques for new interviewers.<sup>220</sup>

drop-box formats); Andy Peytchev et al., *Web Survey Design: Paging Versus Scrolling*, 70 Pub. Op. Q. 212 (2006) (comparing the effects of presenting survey questions in a multitude of short pages or in long scrollable pages).

218. Don A. Dillman & Benjamin L. Messer, *Mixed-Mode Surveys*, in Wright & Marsden, *supra* note 1, at 550, 553.

219. Toys “R” Us, Inc. v. Canarsie Kiddie Shop, Inc., 559 F. Supp. 1189, 1205 (E.D.N.Y. 1983).

220. Fowler & Mangione, *supra* note 158, at 117; Nora Cate Schaeffer et al., *Interviewers and Interviewing*, in *Handbook of Survey Research*, *supra* note 1, at 437, 460.

The more complicated the survey instrument is, the more training and experience the interviewers require. Thus, if the interview includes a skip pattern (where, e.g., Questions 4–6 are asked only if the respondent says *yes* to Question 3, and Questions 8–10 are asked only if the respondent says *no* to Question 3), interviewers must be trained to follow the pattern. Note, however, that in surveys conducted using CAPI or CATI procedures, the interviewer will be guided by the computer used to administer the questionnaire.

If the questions require specific probes to clarify ambiguous responses, interviewers must receive instruction on when to use the probes and what to say. In some surveys, the interviewer is responsible for last-stage sampling (i.e., selecting the particular respondents to be interviewed), and training is especially crucial to avoid interviewer bias in selecting respondents who are easiest to approach or easiest to find.

Training and instruction of interviewers should include directions on the circumstances under which interviews are to take place (e.g., question only one respondent at a time outside the hearing of any other respondent). The trustworthiness of a survey is questionable if there is evidence that some interviews were conducted in a setting in which respondents were likely to have been distracted or in which others could overhear. Such evidence of careless administration of the survey was one ground used by a court to reject as inadmissible a survey that purported to demonstrate consumer confusion.<sup>221</sup>

Some compromises may be accepted when surveys must be conducted swiftly. In trademark and deceptive advertising cases, the plaintiff's usual request is for a preliminary injunction, because a delay means irreparable harm. Nonetheless, careful instruction and training of interviewers who administer the survey, as well as monitoring and validation to ensure quality control,<sup>222</sup> and complete disclosure of the methods used for all of the procedures followed are crucial elements that, if compromised, seriously undermine the trustworthiness of any survey.

## B. What Did the Interviewers Know About the Survey and Its Sponsorship?

One way to protect the objectivity of survey administration is to avoid telling interviewers who is sponsoring the survey. Interviewers who know the identity of the survey's sponsor may affect results inadvertently by communicating to respondents their expectations or what they believe are the preferred responses of the survey's sponsor. To ensure objectivity in the administration of the survey, it is standard interview practice in surveys conducted for litigation to do double-blind

221. *Toys "R" Us*, 559 F. Supp. at 1204 (some interviews apparently were conducted in a bowling alley; some interviewees waiting to be interviewed overheard the substance of the interview while they were waiting).

222. See Section V.C, *infra*.

research whenever possible: Both the interviewer and the respondent are blind to the sponsor of the survey and its purpose. Thus, the survey instrument should provide no explicit or implicit clues about the sponsorship of the survey or the expected responses. Explicit clues could include a sponsor's letterhead appearing on the survey; implicit clues could include reversing the usual order of the yes and no response boxes on the interviewer's form next to a crucial question, thereby potentially increasing the likelihood that no will be checked.<sup>223</sup>

Nonetheless, in some surveys (e.g., some government surveys), disclosure of the survey's sponsor to respondents (and thus to interviewers) is required. Such surveys call for an evaluation of the likely biases introduced by interviewer or respondent awareness of the survey's sponsorship. In evaluating the consequences of sponsorship awareness, it is important to consider (1) whether the sponsor has views and expectations that are apparent and (2) whether awareness is confined to the interviewers or involves the respondents. For example, if a survey concerning attitudes toward gun control is sponsored by the National Rifle Association, it is clear that responses opposing gun control are likely to be preferred. In contrast, if the survey on gun control attitudes is sponsored by the Department of Justice, the identity of the sponsor may not suggest the kinds of responses the sponsor expects or would find acceptable.<sup>224</sup> When interviewers are well trained, their awareness of sponsorship may be a less serious threat than respondents' awareness. The empirical evidence for the effects of interviewers' prior expectations on respondents' answers generally reveals modest effects when the interviewers are well trained.<sup>225</sup>

### *C. What Procedures Were Used to Ensure and Determine That the Survey Was Administered to Minimize Error and Bias?*

Three methods are used to ensure that the survey instrument was implemented in an unbiased fashion and according to instructions. The first, monitoring the interviews as they occur, is done most easily when telephone surveys are used. A supervisor listens to a sample of interviews for each interviewer. Field settings make monitoring more difficult, but evidence that monitoring has occurred provides an additional indication that the survey has been reliably implemented. Some

223. See *Centaur Communications, Ltd. v. A/S/M Communications, Inc.*, 652 F. Supp. 1105, 1111 n.3 (S.D.N.Y. 1987) (pointing out that reversing the usual order of response choices, yes or no, to no or yes may confuse interviewers as well as introduce bias), aff'd, 830 F.2d 1217 (2d Cir. 1987).

224. See, e.g., Stanley Presser et al., *Survey Sponsorship, Response Rates, and Response Effects*, 73 Soc. Sci. Q. 699, 701 (1992) (different responses to a university-sponsored telephone survey and a newspaper-sponsored survey for questions concerning attitudes toward the mayoral primary, an issue on which the newspaper had taken a position).

225. See, e.g., Seymour Sudman et al., *Modest Expectations: The Effects of Interviewers' Prior Expectations on Responses*, 6 Soc. Methods & Res. 171, 181 (1977).

monitoring systems, both telephone and field, now use recordings, procedures that may require permission from respondents.

Second, validation of interviews occurs when respondents in a sample are recontacted to ask whether the initial interviews took place and to determine whether the respondents were qualified to participate in the survey. Validation callbacks may also collect data on a few key variables to confirm that the correct respondent has been interviewed. The standard procedure for validation of in-person interviews is to telephone a random sample of about 10% to 15% of the respondents.<sup>226</sup> Some attempts to reach the respondent will be unsuccessful, and occasionally a respondent will deny that the interview took place even though it did. Because the information checked is typically limited to whether the interview took place and whether the respondent was qualified, this validation procedure does not determine whether the initial interview as a whole was conducted properly. Nonetheless, this standard validation technique warns interviewers that their work is being checked and can detect gross failures in the administration of the survey. In computer-assisted interviews, further validation information can be obtained from the timings that can be automatically recorded when an interview occurs.

A third way to verify that the interviews were conducted properly is to examine the work done by each individual interviewer. By reviewing the interviews and individual responses recorded by each interviewer and comparing patterns of response across interviewers, researchers can identify any response patterns or inconsistencies that warrant further investigation.

When a survey is conducted at the request of a party for litigation rather than in the normal course of business, a heightened standard for validation checks may be appropriate. Thus, independent validation of a random sample of interviews by a third party rather than by the field service that conducted the interviews increases the trustworthiness of the survey results.<sup>227</sup>

## VI. Data Entry and Grouping of Responses

### *A. What Was Done to Ensure That the Data Were Recorded Accurately?*

Analyzing the results of a survey requires that the data obtained on each sampled element be recorded, edited, and often coded before the results can be tabulated

226. See, e.g., *Davis v. Southern Bell Tel. & Tel. Co.*, No. 89-2839, 1994 U.S. Dist. LEXIS 13257, at \*16 (S.D. Fla. Feb. 1, 1994); *National Football League Properties, Inc. v. New Jersey Giants, Inc.*, 637 F. Supp. 507, 515 (D.N.J. 1986).

227. In *Rust Environment & Infrastructure, Inc. v. Teunissen*, 131 F.3d 1210, 1218 (7th Cir. 1997), the court criticized a survey in part because it “did not comport with accepted practice for independent validation of the results.”

and processed. Procedures for data entry should include checks for completeness, checks for reliability and accuracy, and rules for resolving inconsistencies. Accurate data entry is maximized when responses are verified by duplicate entry and comparison, and when data-entry personnel are unaware of the purposes of the survey.

### *B. What Was Done to Ensure That the Grouped Data Were Classified Consistently and Accurately?*

Coding of answers to open-ended questions requires a detailed set of instructions so that decision standards are clear and responses can be scored consistently and accurately. Two trained coders should independently score the same responses to check for the level of consistency in classifying responses. When the criteria used to categorize verbatim responses are controversial or allegedly inappropriate, those criteria should be sufficiently clear to reveal the source of disagreements. In all cases, the verbatim responses should be available so that they can be recoded using alternative criteria.<sup>228</sup>

## VII. Disclosure and Reporting

### *A. When Was Information About the Survey Methodology and Results Disclosed?*

Objections to the definition of the relevant population, the method of selecting the sample, and the wording of questions generally are raised for the first time when the results of the survey are presented. By that time it is often too late to correct methodological deficiencies that could have been addressed in the planning stages of the survey. The plaintiff in a trademark case<sup>229</sup> submitted a set of proposed survey questions to the trial judge, who ruled that the survey results

228. See, e.g., Revlon Consumer Prods. Corp. v. Jennifer Leather Broadway, Inc., 858 F. Supp. 1268, 1276 (S.D.N.Y. 1994) (inconsistent scoring and subjective coding led court to find survey so unreliable that it was entitled to no weight), *aff'd*, 57 F.3d 1062 (2d Cir. 1995); Rock v. Zimmerman, 959 F.2d 1237, 1253 n.9 (3d Cir. 1992) (court found that responses on a change-of-venue survey incorrectly categorized respondents who believed the defendant was insane as believing he was guilty); Coca-Cola Co. v. Tropicana Prods., Inc., 538 F. Supp. 1091, 1094–96 (S.D.N.Y.) (plaintiff's expert stated that respondents' answers to the open-ended questions revealed that 43% of respondents thought Tropicana was portrayed as fresh squeezed; the court's own tabulation found no more than 15% believed this was true), *rev'd on other grounds*, 690 F.2d 312 (2d Cir. 1982); see also Cumberland Packing Corp. v. Monsanto Co., 140 F. Supp. 2d 241 (E.D.N.Y. 2001) (court examined verbatim responses that respondents gave to arrive at a confusion level substantially lower than the level reported by the survey expert).

229. Union Carbide Corp. v. Ever-Ready, Inc., 392 F. Supp. 280 (N.D. Ill. 1975), *rev'd*, 531 F.2d 366 (7th Cir. 1976).

would be admissible at trial while reserving the question of the weight the evidence would be given.<sup>230</sup> The Seventh Circuit called this approach a commendable procedure and suggested that it would have been even more desirable if the parties had “attempt[ed] in good faith to agree upon the questions to be in such a survey.”<sup>231</sup>

The *Manual for Complex Litigation, Second*, recommended that parties be required, “before conducting any poll, to provide other parties with an outline of the proposed form and methodology, including the particular questions that will be asked, the introductory statements or instructions that will be given, and other controls to be used in the interrogation process.”<sup>232</sup> The parties then were encouraged to attempt to resolve any methodological disagreements before the survey was conducted.<sup>233</sup> Although this passage in the second edition of the Manual has been cited with apparent approval,<sup>234</sup> the prior agreement that the Manual recommends has occurred rarely, and the *Manual for Complex Litigation, Fourth*, recommends, but does not advocate requiring, prior disclosure and discussion of survey plans.<sup>235</sup> As the Manual suggests, however, early disclosure can enable the parties to raise prompt objections that may permit corrective measures to be taken before a survey is completed.<sup>236</sup>

Rule 26 of the Federal Rules of Civil Procedure requires extensive disclosure of the basis of opinions offered by testifying experts. However, Rule 26 does not produce disclosure of all survey materials, because parties are not obligated to disclose information about nontestifying experts. Parties considering whether to commission or use a survey for litigation are not obligated to present a survey that produces unfavorable results. Prior disclosure of a proposed survey instrument places the party that ultimately would prefer not to present the survey in the position of presenting damaging results or leaving the impression that the results are not being presented because they were unfavorable. Anticipating such a situation,

230. Before trial, the presiding judge was appointed to the court of appeals, and so the case was tried by another district court judge.

231. *Union Carbide*, 531 F.2d at 386. More recently, the Seventh Circuit recommended filing a motion in limine, asking the district court to determine the admissibility of a survey based on an examination of the survey questions and the results of a preliminary survey before the party undertakes the expense of conducting the actual survey. *Piper Aircraft Corp. v. Wag-Aero, Inc.*, 741 F.2d 925, 929 (7th Cir. 1984). On one recent occasion, the parties jointly developed a survey administered by a neutral third-party survey firm. *Scott v. City of New York*, 591 F. Supp. 2d 554, 560 (S.D.N.Y. 2008) (survey design, including multiple pretests, negotiated with the help of the magistrate judge).

232. MCL 2d, *supra* note 16, § 21.484.

233. *See id.*

234. *See, e.g.*, *National Football League Props., Inc. v. New Jersey Giants, Inc.*, 637 F. Supp. 507, 514 n.3 (D.N.J. 1986).

235. MCL 4th, *supra* note 16, § 11.493 (“including the specific questions that will be asked, the introductory statements or instructions that will be given, and other controls to be used in the interrogation process.”).

236. *See id.*

parties do not decide whether an expert will testify until after the results of the survey are available.

Nonetheless, courts are in a position to encourage early disclosure and discussion even if they do not lead to agreement between the parties. In *McNeilab, Inc. v. American Home Products Corp.*,<sup>237</sup> Judge William C. Conner encouraged the parties to submit their survey plans for court approval to ensure their evidentiary value; the plaintiff did so and altered its research plan based on Judge Conner's recommendations. Parties can anticipate that changes consistent with a judicial suggestion are likely to increase the weight given to, or at least the prospects of admissibility of, the survey.<sup>238</sup>

### *B. Does the Survey Report Include Complete and Detailed Information on All Relevant Characteristics?*

The completeness of the survey report is one indicator of the trustworthiness of the survey and the professionalism of the expert who is presenting the results of the survey. A survey report generally should provide in detail:

1. The purpose of the survey;
2. A definition of the target population and a description of the sampling frame;
3. A description of the sample design, including the method of selecting respondents, the method of interview, the number of callbacks, respondent eligibility or screening criteria and method, and other pertinent information;
4. A description of the results of sample implementation, including the number of
  - a. potential respondents contacted,
  - b. potential respondents not reached,
  - c. noneligibles,
  - d. refusals,
  - e. incomplete interviews or terminations, and
  - f. completed interviews;
5. The exact wording of the questions used, including a copy of each version of the actual questionnaire, interviewer instructions, and visual exhibits;<sup>239</sup>

237. 848 F2d 34, 36 (2d Cir. 1988) (discussing with approval the actions of the district court). See also *Hubbard v. Midland Credit Mgmt*, 2009 U.S. Dist. LEXIS 13938 (S.D. Ind. Feb. 23, 2009) (court responded to plaintiff's motions to approve survey methodology with a critique of the proposed methodology).

238. Larry C. Jones, *Developing and Using Survey Evidence in Trademark Litigation*, 19 Memphis St. U. L. Rev. 471, 481 (1989).

239. The questionnaire itself can often reveal important sources of bias. See *Marria v. Broaddus*, 200 F. Supp. 2d 280, 289 (S.D.N.Y. 2002) (court excluded survey sent to prison administrators based

6. A description of any special scoring (e.g., grouping of verbatim responses into broader categories);
7. A description of any weighting or estimating procedures used;
8. Estimates of the sampling error, where appropriate (i.e., in probability samples);
9. Statistical tables clearly labeled and identified regarding the source of the data, including the number of raw cases forming the base for each table, row, or column; and
10. Copies of interviewer instructions, validation results, and code books.<sup>240</sup>

Additional information to include in the survey report may depend on the nature of sampling design. For example, reported response rates along with the time each interview occurred may assist in evaluating the likelihood that nonresponse biased the results. In a survey designed to assess the duration of employee preshift activities, workers were approached as they entered the workplace; records were not kept on refusal rates or the timing of participation in the study. Thus, it was impossible to rule out the plausible hypothesis that individuals who arrived early for their shift with more time to spend on preshift activities were more likely to participate in the study.<sup>241</sup>

Survey professionals generally do not describe pilot testing in their survey reports. They would be more likely to do so if courts recognized that surveys are improved by pilot work that maximizes the likelihood that respondents understand the questions they are being asked. Moreover, the Federal Rules of Civil Procedure may require that a testifying expert disclose pilot work that serves as a basis for the expert's opinion. The situation is more complicated when a non-testifying expert conducts the pilot work and the testifying expert learns about the pilot testing only indirectly through the attorney's advice about the relevant issues

on questionnaire that began, "We need your help. We are helping to defend the NYS Department of Correctional Service in a case that involves their policy on intercepting Five-Percenter literature. Your answers to the following questions will be helpful in preparing a defense.").

240. These criteria were adapted from the Council of American Survey Research Organizations, *supra* note 76, § III.B. Failure to supply this information substantially impairs a court's ability to evaluate a survey. *In re Prudential Ins. Co. of Am. Sales Practices Litig.*, 962 F. Supp. 450, 532 (D.N.J. 1997) (citing the first edition of this manual). *But see Florida Bar v. Went for It, Inc.*, 515 U.S. 618, 626–28 (1995), in which a majority of the Supreme Court relied on a summary of results prepared by the Florida Bar from a consumer survey purporting to show consumer objections to attorney solicitation by mail. In a strong dissent, Justice Kennedy, joined by three other Justices, found the survey inadequate based on the document available to the court, pointing out that the summary included "no actual surveys, few indications of sample size or selection procedures, no explanations of methodology, and no discussion of excluded results . . . no description of the statistical universe or scientific framework that permits any productive use of the information the so-called Summary of Record contains." *Id.* at 640.

241. See *Chavez v. IBP, Inc.*, 2004 U.S. Dist. LEXIS 28838 (E.D. Wash. Aug. 18, 2004).

in the case. Some commentators suggest that attorneys are obligated to disclose such pilot work.<sup>242</sup>

### C. In Surveys of Individuals, What Measures Were Taken to Protect the Identities of Individual Respondents?

The respondents questioned in a survey generally do not testify in legal proceedings and are unavailable for cross-examination. Indeed, one of the advantages of a survey is that it avoids a repetitious and unrepresentative parade of witnesses. To verify that interviews occurred with qualified respondents, standard survey practice includes validation procedures,<sup>243</sup> the results of which should be included in the survey report.

Conflicts may arise when an opposing party asks for survey respondents' names and addresses so that they can re-interview some respondents. The party introducing the survey or the survey organization that conducted the research generally resists supplying such information.<sup>244</sup> Professional surveyors as a rule promise confidentiality in an effort to increase participation rates and to encourage candid responses, although to the extent that identifying information is collected, such promises may not effectively prevent a lawful inquiry. Because failure to extend confidentiality may bias both the willingness of potential respondents to participate in a survey and their responses, the professional standards for survey researchers generally prohibit disclosure of respondents' identities. "The use of survey results in a legal proceeding does not relieve the Survey Research Organization of its ethical obligation to maintain in confidence all Respondent-identifiable information or lessen the importance of Respondent anonymity."<sup>245</sup> Although no surveyor-respondent privilege currently is recognized, the need for surveys and the availability of other means to examine and ensure their trustworthiness argue for deference to legitimate claims for confidentiality in order to avoid seriously compromising the ability of surveys to produce accurate information.<sup>246</sup>

242. See Yvonne C. Schroeder, *Pretesting Survey Questions*, 11 Am. J. Trial Advoc. 195, 197–201 (1987).

243. See *supra* Section V.C.

244. See, e.g., Alpo Petfoods, Inc. v. Ralston Purina Co., 720 F. Supp. 194 (D.D.C. 1989), *aff'd in part and vacated in part*, 913 F.2d 958 (D.C. Cir. 1990).

245. Council of Am. Survey Res. Orgs., *supra* note 76, § I.A.3.f. Similar provisions are contained in the By-Laws of the American Association for Public Opinion Research.

246. United States v. Dentsply Int'l, Inc., 2000 U.S. Dist. LEXIS 6994, at \*23 (D. Del. May 10, 2000) (Fed. R. Civ. P. 26(a)(1) does not require party to produce the identities of individual survey respondents); Litton Indus., Inc., No. 9123, 1979 FTC LEXIS 311, at \*13 & n.12 (June 19, 1979) (Order Concerning the Identification of Individual Survey-Respondents with Their Questionnaires) (citing Frederick H. Boness & John F. Cordes, *The Researcher-Subject Relationship: The Need for Protection and a Model Statute*, 62 Geo. L.J. 243, 253 (1973)); see also Applera Corp. v. MJ Research, Inc., 389 F. Supp. 2d 344, 350 (D. Conn. 2005) (denying access to names of survey respondents); Lampshire

Copies of all questionnaires should be made available upon request so that the opposing party has an opportunity to evaluate the raw data. All identifying information, such as the respondent's name, address, and telephone number, should be removed to ensure respondent confidentiality.

## VIII. Acknowledgment

Thanks are due to Jon Krosnick for his research on surveys and his always sage advice.

v. Procter & Gamble Co., 94 F.R.D. 58, 60 (N.D. Ga. 1982) (defendant denied access to personal identifying information about women involved in studies by the Centers for Disease Control based on Fed. R. Civ. P. 26(c) giving court the authority to enter "any order which justice requires to protect a party or persons from annoyance, embarrassment, oppression, or undue burden or expense.") (citation omitted).

## Glossary of Terms

The following terms and definitions were adapted from a variety of sources, including Handbook of Survey Research (Peter H. Rossi et al. eds., 1st ed. 1983; Peter V. Marsden & James D. Wright eds., 2d ed. 2010); Measurement Errors in Surveys (Paul P. Biemer et al. eds., 1991); Willem E. Saris, Computer-Assisted Interviewing (1991); Seymour Sudman, Applied Sampling (1976).

**branching.** A questionnaire structure that uses the answers to earlier questions to determine which set of additional questions should be asked (e.g., citizens who report having served as jurors on a criminal case are asked different questions about their experiences than citizens who report having served as jurors on a civil case).

**CAI (computer-assisted interviewing).** A method of conducting interviews in which an interviewer asks questions and records the respondent's answers by following a computer-generated protocol.

**CAPI (computer-assisted personal interviewing).** A method of conducting face-to-face interviews in which an interviewer asks questions and records the respondent's answers by following a computer-generated protocol.

**CATI (computer-assisted telephone interviewing).** A method of conducting telephone interviews in which an interviewer asks questions and records the respondent's answers by following a computer-generated protocol.

**closed-ended question.** A question that provides the respondent with a list of choices and asks the respondent to choose from among them.

**cluster sampling.** A sampling technique allowing for the selection of sample elements in groups or clusters, rather than on an individual basis; it may significantly reduce field costs and may increase sampling error if elements in the same cluster are more similar to one another than are elements in different clusters.

**confidence interval.** An indication of the probable range of error associated with a sample value obtained from a probability sample.

**context effect.** A previous question influences the way the respondent perceives and answers a later question.

**convenience sample.** A sample of elements selected because they were readily available.

**coverage error.** Any inconsistencies between the sampling frame and the target population.

**double-blind research.** Research in which the respondent and the interviewer are not given information that will alert them to the anticipated or preferred pattern of response.

**error score.** The degree of measurement error in an observed score (see true score).

**full-filter question.** A question asked of respondents to screen out those who do not have an opinion on the issue under investigation before asking them the question proper.

**mall intercept survey.** A survey conducted in a mall or shopping center in which potential respondents are approached by a recruiter (intercepted) and invited to participate in the survey.

**multistage sampling design.** A sampling design in which sampling takes place in several stages, beginning with larger units (e.g., cities) and then proceeding with smaller units (e.g., households or individuals within these units).

**noncoverage error.** The omission of eligible population units from the sampling frame.

**nonprobability sample.** Any sample that does not qualify as a probability sample.

**open-ended question.** A question that requires the respondent to formulate his or her own response.

**order effect.** A tendency of respondents to choose an item based in part on the order of response alternatives on the questionnaire (see primacy effect and recency effect).

**parameter.** A summary measure of a characteristic of a population (e.g., average age, proportion of households in an area owning a computer). Statistics are estimates of parameters.

**pilot test.** A small field test replicating the field procedures planned for the full-scale survey; although the terms *pilot test* and *pretest* are sometimes used interchangeably, a pretest tests the questionnaire, whereas a pilot test generally tests proposed collection procedures as well.

**population.** The totality of elements (individuals or other units) that have some common property of interest; the target population is the collection of elements that the researcher would like to study. Also, universe.

**population value, population parameter.** The actual value of some characteristic in the population (e.g., the average age); the population value is estimated by taking a random sample from the population and computing the corresponding sample value.

**pretest.** A small preliminary test of a survey questionnaire. See pilot test.

**primacy effect.** A tendency of respondents to choose early items from a list of choices; the opposite of a recency effect.

**probability sample.** A type of sample selected so that every element in the population has a known nonzero probability of being included in the sample; a simple random sample is a probability sample.

**probe.** A followup question that an interviewer asks to obtain a more complete answer from a respondent (e.g., “Anything else?” “What kind of medical problem do you mean?”).

**quasi-filter question.** A question that offers a “don’t know” or “no opinion” option to respondents as part of a set of response alternatives; used to screen out respondents who may not have an opinion on the issue under investigation.

**random sample.** See probability sample.

**recency effect.** A tendency of respondents to choose later items from a list of choices; the opposite of a primacy effect.

**sample.** A subset of a population or universe selected so as to yield information about the population as a whole.

**sampling error.** The estimated size of the difference between the result obtained from a sample study and the result that would be obtained by attempting a complete study of all units in the sampling frame from which the sample was selected in the same manner and with the same care.

**sampling frame.** The source or sources from which the individuals or other units in a sample are drawn.

**secondary meaning.** A descriptive term that becomes protectable as a trademark if it signifies to the purchasing public that the product comes from a single producer or source.

**simple random sample.** The most basic type of probability sample; each unit in the population has an equal probability of being in the sample, and all possible samples of a given size are equally likely to be selected.

**skip pattern, skip sequence.** A sequence of questions in which some should not be asked (should be skipped) based on the respondent’s answer to a previous question (e.g., if the respondent indicates that he does not own a car, he should not be asked what brand of car he owns).

**stratified sampling.** A sampling technique in which the researcher subdivides the population into mutually exclusive and exhaustive subpopulations, or strata; within these strata, separate samples are selected. Results can be combined to form overall population estimates or used to report separate within-stratum estimates.

**survey-experiment.** A survey with one or more control groups, enabling the researcher to test a causal proposition.

**survey population.** See population.

**systematic sampling.** A sampling technique that consists of a random starting point and the selection of every *n*th member of the population; it is generally analyzed as if it were a simple random sample and generally produces the same results..

**target population.** See population.

**trade dress.** A distinctive and nonfunctional design of a package or product protected under state unfair competition law and the federal Lanham Act § 43(a), 15 U.S.C. § 1125(a) (1946) (amended 1992).

**true score.** The underlying true value, which is unobservable because there is always some error in measurement; the observed score = true score + error score.

**universe.** See population.

## References on Survey Research

Paul P. Biemer, Robert M. Groves, Lars E. Lyberg, Nancy A. Mathiowetz, & Seymour Sudman (eds.), *Measurement Errors in Surveys* (2004).

Jean M. Converse & Stanley Presser, *Survey Questions: Handcrafting the Standardized Questionnaire* (1986).

Mick P. Couper, *Designing Effective Web Surveys* (2008).

Don A. Dillman, Jolene Smyth, & Leah M. Christian, *Internet, Mail and Mixed-Mode Surveys: The Tailored Design Method* (3d ed. 2009).

Robert M. Groves, Floyd J. Fowler, Jr., Mick P. Couper, James M. Lepkowski, Eleanor Singer, & Roger Tourangeau, *Survey Methodology* (2004).

Sharon Lohr, *Sampling: Design and Analysis* (2d ed. 2010).

*Questions About Questions: Inquiries into the Cognitive Bases of Surveys* (Judith M. Tanur ed., 1992).

Howard Schuman & Stanley Presser, *Questions and Answers in Attitude Surveys: Experiments on Question Form, Wording and Context* (1981).

Monroe G. Sirken, Douglas J. Herrmann, Susan Schechter, Norbert Schwarz, Judith M. Tanur, & Roger Tourangeau, *Cognition and Survey Research* (1999).

Seymour Sudman, *Applied Sampling* (1976).

*Survey Nonresponse* (Robert M. Groves, Don A. Dillman, John L. Eltinge, & Roderick J. A. Little eds., 2002).

*Telephone Survey Methodology* (Robert M. Groves, Paul P. Biemer, Lars E. Lyberg, James T. Massey, & William L. Nicholls eds., 1988).

Roger Tourangeau, Lance J. Rips, & Kenneth Rasinski, *The Psychology of Survey Response* (2000).

(Filed Under Seal Pursuant to Protective  
Order Regarding Confidential Materials)

**EXCEL**

**PROVIDED IN  
NATIVE FORMAT**

(Filed Under Seal Pursuant to Protective  
Order Regarding Confidential Materials)

**EXCEL**

**PROVIDED IN  
NATIVE FORMAT**



# Rebuttal of Dr. King's Report Regarding Match.com's Online Subscription Cancellation Flow

May 15, 2023



APP 0313

## I. ASSIGNMENT

1. I was retained by Sidley Austin LLP on behalf of Defendants Match Group, Inc. and Match Group, LLC in this matter. In this report, I have been asked to review, evaluate, and respond, if appropriate, to the opinions offered in the report in this case by Dr. Jennifer King on behalf of the FTC. In this report, I assess the methodology used by Dr. King in her purported heuristic evaluation of the usability of Match.com's online cancelation flow and her conclusions derived from that evaluation.

## II. QUALIFICATIONS

2. My qualifications are described in my opening report in this matter, dated January 13, 2023.

## III. SUMMARY OF DR. KING'S METHOD & CONCLUSIONS

3. In her report, Dr. King explains she was asked by the FTC to evaluate Match.com's cancelation flow based on the following inquiries:
  - a. Was Match.com's cancelation process easy to use?
  - b. Was Match.com's cancelation process easy to find?
4. Dr. King conducted no empirical research to support her conclusions. Dr. King conducted no objective analysis.
5. Instead, Dr. King used what she says was a heuristic evaluation-only approach to assess the cancelation flow on Match.com's website, which involved only a visual review of the Match.com flows conducted by viewing (i) recordings of the Match.com website as it appeared between 2016 and 2022, and (ii) screenshots from around the same periods. She also reviewed a few internal Match.com communications. It does not appear that Dr. King ever interacted with a live version of the website

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 285 of 356 PageID 11362  
herself. Nor did she interact with, interview, or study the actual behavior of any Match.com subscribers or potential Match.com subscribers. Had she done so, she likely would have evaluated things quite differently and may have been better able to recognize the ease and simplicity of the flow.

6. Dr. King identified factors for evaluation, compared representations of the Match.com cancelation flow to these factors, and made observations about each factor to inform her conclusions for the two assigned questions. The factors Dr. King applied to the Match.com cancelation flow include Placement and Prominence, Appearance, User Flow Architecture, System Status and Feedback, Terminology/Content Strategy, Readability, Friction, and Dark Patterns. Dr. King opines that these factors are “most relevant to a usability inspection of disclosures or other information communicated to users by an interface,”<sup>1</sup> but it is unclear how or why Dr. King selected these particular factors as most relevant.
7. Dr. King formed conclusions about the Match.com cancelation flow for three of ten of Nielsen’s Usability Heuristics<sup>2</sup> by discussing screenshots and articulating her observations about each factor. She supported some conclusions by citing usability guidelines, definitions of various dark patterns, and the Nielsen Norman Group Guidelines. She supported other conclusions with her experience as an academic in the Human-Computer Interface (HCI) field, her knowledge of the relevant research and publications, and her personal perceptions of the material.
8. Dr. King concluded the Match.com cancelation flow was not simple or easy to do or find. However, she offers no evidence or supporting data that support that opinion. Furthermore, Dr. King’s heuristic conclusions are based on an evaluation that has significant limitations, includes no supporting data for her

---

<sup>1</sup> Page 12

<sup>2</sup> <https://www.nngroup.com/articles/ten-usability-heuristics/>

conclusions, may have been biased by her work with dark patterns, and includes several factual

inaccuracies giving rise to a range of interpretations, which I explain below.

## IV. SUMMARY OF REBUTTAL TO DR. KING'S REPORT

9. Dr. King's analysis and opinions are unsupported and unreliable. In fact, the objective evidence affirmatively contradicts Dr. King's opinions. Dr. King's analysis suffers from several fatal flaws that render it unreliable.
10. First, Dr. King conducted no empirical study or test to determine how customers actually used or interacted with Match.com's cancelation flow. No expert opinion is as reliable as an empirical study, like the one I conducted. Dr. King's report is replete with speculation about what users *might* believe or experience, without any supporting evidence.
11. Opinions on whether a task is easy or simple to find and do must be tested using a standard usability testing methodology, based on sufficient and reliable evidence, and protected from contradictory interpretations to be reliable. Any heuristic or expert analysis must be bolstered by such objective evidence.
12. Second, Dr. King did not conduct a proper heuristic or usability analysis. Indeed, she did not even actually use Match.com's cancelation flow. One cannot offer even a personal opinion on how the cancelation process works or how simple it is, without using it. That is why I personally went through the cancelation flow several times. Dr. King did not at all. Instead, she relied on videos or screenshots, but that is simply not how actual customers see and use the flow, nor a reliable way to experience something for oneself. Had she actually experienced the flow for herself, she likely would have evaluated things quite differently and may have been better able to recognize the ease and simplicity of the flow.

13. Third, Dr. King used only a subset of the factors necessary for a heuristic analysis. She cherrypicked

factors that (she thought) supported her view while ignoring the other factors. An objective analysis looks at all of the factors in the literature (as I did) and applies them to the facts without bias.

14. Setting aside methodology, Dr. King also errs substantively in conducting her analysis. Several of her descriptions of the site are factually inaccurate (perhaps due to her lack of firsthand use of the site), and even where she correctly describes a component of the site, her heuristic analysis is myopic and ignores important context that is relevant to a user's use of the site and therefore usability.

15. Finally, and perhaps most importantly, the results of my usability study (as described in my opening report) and Match.com's actual subscriber data disprove much of Dr. King's speculation about how subscribers experience Match.com's cancelation flow. Even if Dr. King personally believes that the Match.com cancelation flow is not simple or contains confusing "dark patterns," actual Match.com users and usability study participants have spoken and disagree.

## V. ASSESSMENT OF DR. KING'S METHODOLOGY

### I. Dr. King Provides No Empirical Evidence or Objective Analysis

16. The most fundamental problem with Dr. King's analysis is that she does not offer any empirical evidence or objective analysis for her conclusions. Instead, Dr. King looked at a few screenshots and videos of Match.com's cancelation flow and provided her subjective opinion on it. Dr. King then repeatedly speculates about what users "may," "might," or "could" experience, without any objective evidence of what users actually experienced to support her claims. The only way to truly know how users respond to the cancelation flow is to test it. That is why we have the field of usability testing and research. Even the most esteemed expert cannot tell you how ordinary users will respond to a user interface or cancelation flow. "User interfaces and human behavior are both so complex that the interaction between the two does not lend itself to pure guesses based on personal opinion. You need data to learn what works, what

own echo chamber."<sup>3</sup> That is why I tested empirically, with actual consumers, whether Match.com's cancelation flow is simple or not. That empirical data showed that:

- a. **98.78% successfully found Manage Subscription**, the entry point to canceling
- b. **91.5% successfully canceled**, with an average time of **74 seconds**, on average **6.1 times faster** than subscribing, making it even easier than the sign-up process (i.e., creating an account and subscribing)
- c. Match.com received an "**A Grade**" (**81.6**) on the System Usability Scale
- d. **88.3% of participants thought canceling was simple** or were at least neutral as to the simplicity/difficulty
- e. **84.7% of participants thought canceling was at least as simple as signing up**

17. This empirical and objective data from real consumers is far more persuasive than any subjective heuristic analysis done by an expert witness hired by a party.

18. Indeed, a purely subjective approach is not reliable. Dr. King herself cites<sup>4</sup> an article that points out the dangers of relying solely on heuristic analyses, including the risk of bias and the risk of uncovering low-severity problems. This article describes how only doing a heuristic analysis "...can cause disadvantages such as the *risk of bias* and the risk to uncover *low-severity* problems that aren't big problems at all (false positives). Another problem is that we don't consider the context of the user when we do usability inspection [expert analysis] methods...For that reason, it's always a good idea (especially because we are the advocates for our users and hence "User Experience" professionals) to bring the real user to the table from time to time, see what they do, see where they struggle, and hear what they have to say instead of

---

<sup>3</sup> <https://www.nngroup.com/articles/user-exposure-goals/>

<sup>4</sup> Page 10

19. Similarly, Dr. King’s citation of Usability.gov likewise identifies the disadvantages of a heuristics-only analysis. The article explains how heuristic analyses can provide value when used *together with* other testing methods, but expressly warns that “[a] heuristic evaluation should not replace usability testing.”<sup>6</sup> Usability.gov also recognizes that a heuristic evaluation “may identify more minor issues and fewer major issues.” And, recognizing that personal bias may affect results, the article recommends using “multiple experts and aggregat[ing] their results.” Dr. King did none of this. She, therefore, failed to comply with the U.S. government’s own guidelines.

20. Given Dr. King’s area of study and focus on dark patterns, Dr. King may be particularly prone to or biased toward “uncover[ing] low-severity problems” that are more relevant to her work, but less likely to impact an actual subscriber’s use of the site.

21. In short, Dr. King’s expert report is based only on her personal opinions as a “dark pattern” researcher and not based on rigorous research methods. Thus, Dr. King’s opinion cannot be relied upon as an accurate representation of reality for millions of Match.com subscribers.

## II. Dr. King’s Analysis Is Unreliable

22. The second fundamental flaw with Dr. King’s report is that she did not conduct a valid heuristic usability analysis. The whole point of a heuristic analysis is to analyze the user interface by using it yourself, then apply your expertise to identify potential problems that you had or observed. This requires an expert to actually engage with the user interface. Here, that means to cancel a paid Match.com subscription. For me

---

<sup>5</sup> <https://modus.trimble.com/news/2021-04-15-usability-inspection-methods/> (emphasis added)

<sup>6</sup> <https://www.usability.gov/how-to-and-tools/methods/heuristic-evaluation.html>

23. Dr. King, on the other hand, did not actually use the Match.com cancelation flow even once. Dr. King attempts to offer an opinion on the usability and simplicity of the cancelation flow having never used it. This violates a cardinal principle of what we as usability experts do. Instead, Dr. King relied only on static screenshots and videos prepared for her showing others walking through the flow (not actual customers, or usability participants). That is simply not a reliable methodology to conduct an analysis and it violates the very underpinnings of a proper usability and heuristic analysis. “If the users have not actually tried to use the designs, they'll base their comments on surface features. Such input often contrasts strongly with feedback based on real use.”<sup>7</sup>

24. In addition, Dr. King also relies on several “internal company documents discussing the cancellation flow.”<sup>8</sup> Dr. King is apparently referring to internal Match.com emails repeating what customers claimed were concerns about cancelation from subscribers who had reached out to Match.com. But Dr. King’s analysis here is neither objective nor reliable. She did not rely on a balanced collection of documents. Instead, she relied only on feedback from a group of people that is inherently self-selecting and leads to biased results because it is not feedback from a fair representation of all subscribers. As recognized by a leading authority on user design, “[u]sers often make requests for changes to user interfaces that might work for them but would have a negative impact on the majority of the users in your target market.”<sup>9</sup> Dr. King ignores, for example, the millions of subscribers who were able to successfully cancel their Match.com subscription via the online cancelation flow, focusing instead on the small percentage of

---

<sup>7</sup> <https://www.nngroup.com/articles/first-rule-of-usability-dont-listen-to-users/>

<sup>8</sup> Page 8

<sup>9</sup> <https://www.uxmatters.com/mt/archives/2011/03/the-dangers-of-design-by-user.php>

users who **alleged** difficulty with cancelation, regardless of whether they actually attempted online

cancelation.

25. Next, the usability guidelines on which Dr. King relies are, at most, best practice rules of thumb; they are not “fixed rules” or mandatory requirements.<sup>10</sup> Guidelines are not “rigid standards that can form the basis of a contract or lawsuit.”<sup>11</sup> Put differently, even a website that does not satisfy all of the usability guidelines may still be “easy” or “simple,” especially because guidelines may require adaptation depending on the type of website (e.g., informational versus e-commerce).<sup>11</sup> Yet Dr. King never explains how she translates the alleged “violation of usability heuristics” she finds into the conclusion that Match.com’s cancelation flow is not easy to find or easy to use.

26. Similarly, Dr. King claims to have identified several “dark patterns” in Match.com’s cancelation flow, but she does not explain at what point a dark pattern (or dark patterns) makes a website not easy to use. It is unclear what standard Dr. King is using to determine if or how any purported dark pattern translates into “not easy to use” or “not simple.” She also doesn’t identify how common the alleged dark patterns she claims to have found on Match.com are on other sites. I do not mean to say commonality is a defense against the use of a dark pattern; rather, a common pattern found across many experiences across the web decreases the risk of consumer confusion if consumers are familiar with the pattern. Indeed, Dr. King herself notes “[i]t’s the subversion of users’ expectations with respect to these common design patterns that creates confusion, manipulation, and deception (*i.e.*, dark patterns).”<sup>12</sup> Dr. King also does not indicate

---

<sup>10</sup> Michael O’Leavitt and Ben Schneiderman, “Foreword,” Research-Based Web Design & Usability Guidelines, 2006, p. xix, available at [https://www.usability.gov/sites/default/files/documents/guidelines\\_book.pdf](https://www.usability.gov/sites/default/files/documents/guidelines_book.pdf)

<sup>11</sup> Michael O’Leavitt and Ben Schneiderman, “Foreword,” Research-Based Web Design & Usability Guidelines, 2006, p. iii, available at [https://www.usability.gov/sites/default/files/documents/guidelines\\_book.pdf](https://www.usability.gov/sites/default/files/documents/guidelines_book.pdf)

<sup>12</sup> Page 21

how many dark patterns, or what combination of them, would push an experience over the line from

"easy" to "not easy."

27. In fact, it is unclear what standard Dr. King used to determine what is "easy." She does not provide any criteria for determining the point at which something becomes "not easy." In contrast, the data and conclusions presented in my opening report are based on a combination of my own experience and analysis, as someone who has worked directly in this field and actually designed websites and apps, as well as research-based data from usability study participants, the results of which clearly show that Match.com's cancelation flow is easy and simple to use.

28. As another problem, Dr. King evaluated in her report only three of Nielsen's ten usability heuristics (and claims that Match.com's cancelation process does not satisfy any of them).<sup>13</sup> Dr. King does not explain how she selected these heuristics and why she ignored others. By omitting usability principles, there is a risk of incomplete and erroneous analyses of users' true and actual perceptions of the cancelation flow.

29. In my opening report, by contrast, I evaluated all ten of Nielsen's usability heuristics, plus Nielsen's 5 quality components of usability, and concluded that Match.com's cancelation flow satisfied all of them.

30. Based on the flaws in Dr. King's heuristic analysis, her methodology is not reliable.

## VI. ASSESSMENT OF DR. KING'S CONCLUSIONS REGARDING THE USABILITY OF MATCH.COM'S CANCELATION FLOW

31. In this Part of my rebuttal report, I respond to Dr. King's analysis of the usability of Match.com's online cancelation flow. I begin with a section responding to Dr. King's characterization of particular pages of the

---

<sup>13</sup> I disagree with Dr. King's conclusion that Match.com's cancelation flow does not satisfy the three heuristics that Dr. King addresses. I address that disagreement below in [Part VI.II](#).

flow. I then address Dr. King's version of a Nielsen usability heuristics analysis, and then her "dark

patterns" analysis.

## I. Response to Dr. King's Opinions About Particular Pages of the Match.com Cancelation Flow

32. Dr. King criticizes a few pages in the Match.com cancelation flow for a variety of reasons. Before addressing the details of Dr. King's purported heuristic and dark pattern analyses, I respond to Dr. King's comments about some of the particular pages in Match.com's cancelation flow.

### **Reauthentication Page<sup>14</sup>**

33. Dr. King argues reauthentication (i.e., requiring entry of a password) in order to manage a customer's subscription information (including updating payment/subscription information, or canceling payment/subscription) is an unnecessary step and therefore makes the flow not easy. However, she fails to cite any evidence, literature, or other experts to support this claim. In fact, although she claims that "literature from computer security experts and practitioners" supports her conclusions that the reauthentication page is unnecessary, she does not identify the literature on which she claims to be relying. I thoroughly covered why reauthentication at this stage does not detract from the simplicity of the cancelation process in my opening report. Here, I respond to Dr. King's specific comments regarding reauthentication.

---

<sup>14</sup> As explained in my opening report, Page 15, I do not consider the reauthentication page part of the "cancelation flow," because a user could visit that page for reasons entirely unrelated to cancelation (such as checking a subscription status). Moreover, no reasonable user could legitimately believe that they had successfully canceled by getting only to the reauthentication page (but not completing it). Thus, the reauthentication page arguably is irrelevant to any analysis of the "cancelation flow." Nevertheless, I respond to Dr. King's opinions about that page.

34. Dr. King claims that “the password screen was arbitrarily placed in the cancellation flow,”<sup>15</sup> and that

reauthentication “...introduces delay into the process, which can vary by user and the complexity of the password reset process...,” speculating that “...resetting a password could introduce significant delays...”<sup>16</sup> I’ve already addressed the issue of reauthentication and password reset in my opening report; specifically, reauthentication is a reasonable and widely used security measure. The two paths of action found under Manage Subscription—Subscription Status, where customers can view their credit card information and/or update it, and Cancel Subscription, where customers can choose to cancel—are danger zones. Accidental editing via casual browsing of one or the other can lead to a cessation of services. Requiring reauthentication at this point is consistent with Nielsen’s heuristic of Error Prevention. Furthermore, an additional layer of security protecting the customer’s information is reasonable. Match.com witnesses have testified that the reason for the reauthentication page was to protect security, not to put up an arbitrary roadblock to cancellation.<sup>17</sup> Indeed, I have become aware that the FTC has brought cases over failure to adequately protect consumer data privacy.<sup>18</sup> A password reauthentication screen protects consumer privacy and is something I would expect the FTC to support, not object to.

35. Furthermore, entering a password is not burdensome. It is relatively simple for a subscriber to enter their password (either from memory or using a password manager), or even to reset their password if they have forgotten it. Dr. King offers no evidence to the contrary, other than speculating that “among less sophisticated users the process of resetting a password could introduce significant delays.” Yet Dr. King does nothing to define “less sophisticated users,” what portion of Match.com’s subscribers such users

---

<sup>15</sup> Page 5

<sup>16</sup> Page 42

<sup>17</sup> Clinchy Dep. 28:19-29:6, 61:21-62:9; Ginsberg Dep. 206:10-207:8; Dubey Dep. 210:3-10.

<sup>18</sup> See, e.g., *In re Chegg, Inc.*, FTC File No. 2023151; *In re Drizly, LLC*, FTC File No. 2023185; *In re Residual Pumpkin Entity, LLC*, FTC File No. 1923209; <https://www.ftc.gov/news-events/topics/protecting-consumer-privacy-security/privacy-security-enforcement>.

“significant” delay is.

36. Dr. King then later suggests that the location of the reauthentication page is not arbitrary, but instead was intentionally placed in the flow to create an obstacle to cancelation. She states: “The arbitrary placement of a password authentication mechanism at this specific point, and not at other points on the website where sensitive information could be accessed and changed without the account holder’s knowledge, suggests that the password authentication was placed at this point as an obstacle for users to access the cancellation flow.”<sup>19</sup> Dr. King’s criticism that the placement was both arbitrary and also intentional shows that she is making inconsistent claims based on speculation and not actual evidence.

37. In any event, Dr. King cites no actual evidence that the reauthentication page was placed in the flow to obstruct cancelation attempts. The basis for Dr. King’s opinion appears to be (1) that a password is unnecessary to “access other account settings that posed a greater risk directly to the user if they were compromised, such as editing one’s name, email address, and password”; (2) speculation by a Match.com employee, based on inaccurate data, that “the majority of members drop out” at the reauthentication page; and (3) the fact that reauthentication in the cancelation flow is required only once per session. None of these bases support Dr. King’s conclusion.

38. First, Dr. King is wrong that there is anything inconsistent about when Match.com requires a password. To begin, Dr. King is factually incorrect when she states that a password is unnecessary to change a password. Setting a new password requires entering the subscriber’s current password first, as depicted below.

---

<sup>19</sup> Page 37

## Manage account details

Update your password below:

Current Password

New Password

Confirm New Password

**Make updates**

**Cancel**

[Forgot my password](#)

Figure 1 - Match.com New Password

39. Match.com uses even greater security controls when a user wants to change an email address, as compared to cancel a subscription. Although Dr. King is correct that a password is not required, changing an email address more than 90 days after signing up requires contacting Customer Care, as depicted below. This is also true for changing other profile information, such as age. In other words, requiring password reauthentication in the cancelation flow is *less* burdensome and time-consuming than alternative ways in which Match.com protects other areas of the user's profile.

In order to help keep your account secure, you may be asked to do the following:

- Enter your current date of birth and password.
- Contact us if you signed up more than 90 days ago and want to update your email address or date of birth.

### Updating an Email Address

When updating your account information, remember that an email address can only be associated with one Match account. If your new email address is not being accepted, it may be linked to an account you created in the past.

*Figure 2 - Match.com Help for changing birthdate or email*

## Manage account details

Change your basic account information.

### Name

Brandon 

### Email

b\*\*\*\*\*d@precocityllc.com 

### Age

46 years old 

To update your age, [contact Customer Care](#).

### Password

\*\*\*\*\* 

*Figure 3 - Match.com Edit Password*

40. Although, indeed, a password isn't required to edit a subscriber's name, Dr. King does not explain how editing a name "pose[s] a greater risk directly to the user." There is little to no risk involved in editing a

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 298 of 356 PageID 11375

display name. A user may want to change their display name for any number of reasons (e.g., from their legal name to a nickname, such as “Joseph” to “Joe,” or to a new name to conform with chosen gender identity), so it makes sense that Match.com would not want to insert a security control there, whereas it would for a cancellation. For that reason, it is common for websites to allow changes to display names without requiring password entry. In my research, I couldn’t find a single example that required reauthentication to change a display name, including Google, LinkedIn, Venmo, Amazon, Slack, Microsoft, and more.

The screenshot shows the 'Name' settings page in Google Account. At the top, there's a back arrow and the word 'Name'. Below that, a note says 'Changes to your name will be reflected across your Google Account.' with a 'Learn more' link. There are two input fields: 'First name' containing 'River' and 'Last name' containing 'Kang'. Under 'Who can see your name', it says 'Anyone can see this info when they communicate with you or view content you create in Google services.' with a 'Learn more' link. At the bottom right are 'Cancel' and 'Save' buttons.

Figure 4 - Google account name change

41. Next, Dr. King relies on Match.com employee communications in which one employee claimed that “the majority of members drop out when asked to re-enter their password.”<sup>20</sup> However, that data is misleading

---

<sup>20</sup> Page 54

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 299 of 356 PageID 11376  
and inaccurate in numerous ways. First, those numbers are based on the number of sessions rather than  
the number of subscribers, so because a subscriber could have multiple sessions (e.g., a single subscriber  
that enters the flow five times would be counted five times in the session data), it does not accurately  
reflect how many subscribers actually “drop out” at each page. Second, it appears the Match.com  
employees were attempting to determine, *of the subscribers who did not resign in a particular session*, at what  
point in the flow did those subscribers “drop out.” That analysis excludes the vast majority of subscribers  
that successfully resigned. Third, it contained various users who could not have been attempting to cancel  
their subscriptions because they did not have a subscription (i.e., were free registrants), because free  
registrants see some of the same pages when deleting their accounts. Fourth, it also contained multiple  
non-U.S. users, which I understand are not relevant to this matter. Finally, another portion of users  
contained in that data had already resigned their subscriptions before entering the resignation flow, so  
they also cannot have been attempting to resign their subscriptions.<sup>21</sup>

42. The flaws in the data on which Dr. King relied are obvious in light of the more complete set of subscriber-level data produced in this litigation. We know that 13,900,434<sup>22</sup> of 15,200,226<sup>23</sup> subscribers that clicked “Manage Subscription” (91.45%) also clicked “Cancel Subscription” (i.e., were able to successfully enter their password and reach the Cancel Subscription page). That means, *at most*, no more than 8.55% of

---

<sup>21</sup> Call with J. Talbott

<sup>22</sup> Sum of column C in MATCHFTC846468

<sup>23</sup> Sum of column C in MATCHFTC846469

“...the majority of users [dropping] out when asked to re-enter their password...”<sup>24</sup>

43. And even that data likely overstates the “dropout rate” because it is impossible to know for certain why users visited a particular page and whether they intended to cancel when they did so (or why they failed to cancel if they did not). For example, of the 8.55% of subscribers mentioned above who “dropped out” at the reauthorization screen, at least some of those subscribers likely intended to visit the “Subscription Status” page, rather than the cancelation flow, which is also accessible after entering a password. Except in the case of a situation like my usability study where the subscribers were told that their explicit goal was to cancel, it’s impossible to know why someone visited the reauthentication page. The first time we can know with any level of likelihood a person intends to cancel is when they click “Cancel Subscription” after the reauthentication page, and even then, they may just be exploring (for example, a user who does not intend to cancel, but wants to see if a save offer is presented).

44. Dr. King is correct that some studies have shown that requiring a password can lead to abandonment. However, the studies Dr. King cites regarding the friction of “sign-in or verification points”<sup>25</sup> all involve areas where the user does not have anything at stake, like online engagement, checkout, making

---

<sup>24</sup> I understand both subscriber-level data and session-level data have been produced in this litigation. I rely on subscriber-level data for the Match.com statistics described in this report because the context of multiple sessions is unknowable and unlikely to have much impact on the question of simplicity or ease of use. In the case of the reauthorization page, it’s also unlikely the prompt was so confusing or burdensome that it forced a subscriber intending to cancel to “drop out” of the cancelation flow during one session but not another. Moreover, it’s important to note that even the session-level data does not support the claim that “the majority of users” drop out when asked to enter their password, as Dr. King claims. For example, from January 2013 through near the end of March 2023, 31,417,912 sessions reached the password page (i.e., clicked Manage Subscription). 57.58% of those sessions (18,088,887) reached the first survey page so they must have successfully entered a password and clicked Cancel Subscription. See MATCHFTC846518. Furthermore, 88.77% (16,056,670) of those sessions (those who clicked “Cancel Subscription”) resulted in a cancelation. See MATCHFTC846516. For the sessions that did not result in a cancelation, we can only guess the cause. The subscriber may have successfully entered a password but did not cancel for a variety of reasons, such as visiting the Subscription Status page rather than clicking “Cancel Subscription” to enter the cancelation flow, or they were simply exploring, or they were interrupted by something entirely unrelated to the design of the flow (such as someone at the door, the phone ringing, a baby crying, etc.).

<sup>25</sup> Page 52

18 of 58

subscription—and are therefore irrelevant to this case. In those cases, if the user gets frustrated and abandons their effort, they keep their money. In this case, if the user abandons their effort, their subscription continues. The scenarios are polar opposites and likely result in different abandonment rates. In fact, we know the abandonment rate is lower for Match.com’s cancelation flow than in the studies that Dr. King cites, as evidenced by my usability study and Match.com’s data described in my opening report.

45. Finally, Dr. King claims that the fact that reauthentication is required only once per session somehow proves that reauthentication was not “a choice motivated by security concerns.” But the security concerns implicated by not requiring reauthentication *at all* and requiring reauthentication once per session are much different. By requiring reauthentication only once per session, Match.com is striking a balance between security and maximizing ease of access in light of security concerns. Attempting to strike that balance does not prove that there are no security concerns at all. Moreover, ironically, requiring reauthentication every time the user selects “Manage Subscription” would create *more* of the friction about which Dr. King complains.

### **Manage Subscription Page**

46. Dr. King criticizes the Manage Subscription page for “mixing of links and buttons.” However, it is quite common for websites to mix links and buttons (see Figure 5 below for an example), so doing so is unlikely to cause any confusion. The use of links and buttons on the Manage Subscription page is particularly unlikely to confuse. Nothing is distracting on the page, and there are clearly only three paths to choose from: Back (indicated by the solid state button); check subscription status (indicated by hyperlink); or cancel subscription (indicated by hyperlink). The hyperlinks are obviously clickable: they appear in blue text, and when a user hovers over them, the text is underlined, and the cursor turns into a hand. All three of the options are titular (i.e., they describe what happens if the user clicks them). Moreover, as explained

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 302 of 356 PageID 11379  
in my opening report, the design of this page is consistent with the Spotted Pattern of screen reading,  
making it easy for a subscriber to identify quickly and easily what to click to take the action the subscriber  
desires.

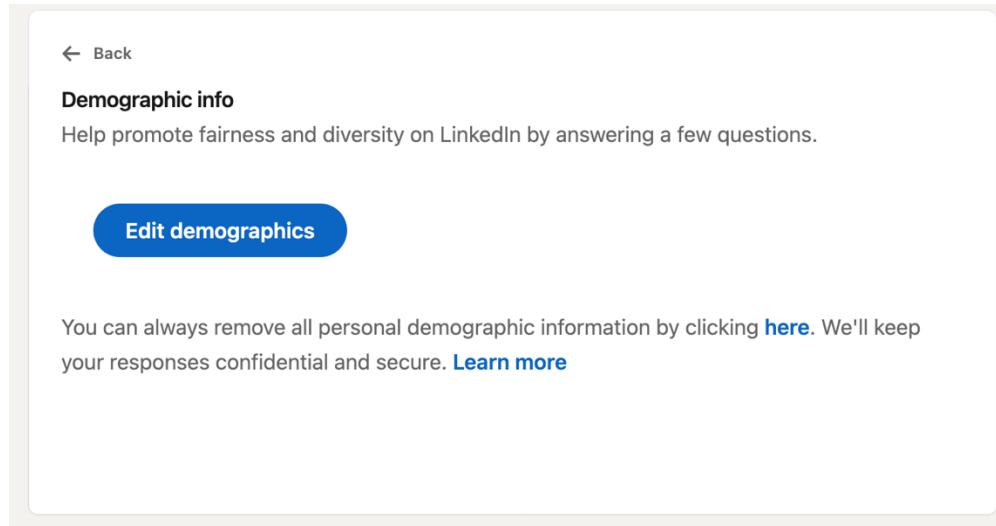


Figure 5 - LinkedIn.com Demographic edit section

## Survey Questions

47. Dr. King next criticizes the inclusion of survey questions in the cancelation flow on a few bases, including that the survey violates the aesthetics heuristic, creates “obstruction,” causes “forced action,” and constitutes “hidden information” (because the questions are not expressly labeled as optional). I disagree with Dr. King’s opinions, as the survey questions in Match.com’s cancelation flow are standard best practices and do not cause the flow to be not easy or simple.

48. Although Dr. King claims that survey questions are “pepper[ed]” throughout the flow, there are only a few optional survey questions in a wizard format, meaning for clarity and improved usability, the questions are split across pages, with only one question appearing at a time. Dr. King objects that the survey

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 303 of 356 PageID 11380  
questions are "...spread over two disconnected pages..."<sup>26</sup> suggesting it would be an improvement to put all questions on a single page. However, separating questions is a best practice among popular survey tools such as SurveyMonkey, Typeform, and Jotform. "Displaying one question at a time is the fastest and easiest way to conduct a survey. This method improves the user experience, which increases the likelihood that a respondent will continue until they reach the end of the survey."<sup>27</sup> Dr. King's inferred recommendation would actually increase friction and likely act against the customer's best interest in this regard.

49. Dr. King also objects to the use of survey questions in the flow at all. But the survey questions are important because good user and customer experience design mean continuously gathering feedback to understand the real reasons why users do what they do, particularly for a business like Match.com where a user may be canceling because of a good experience (e.g., they found a match) or a bad experience (e.g., they disliked their potential matches). Improving the experience for current, new, and returning customers, in the case of cancellation, means understanding why users are leaving so the business knows how it is performing and what, if any, improvements need to be made, much like how a retailer may ask why a customer is returning an item. Surveys are an important part of improving retention and having data for usability experts to look at to improve changes elsewhere on the site. Companies like ProsperStack built their business around helping companies keep their users retained and happy. ProsperStack recommends (1) having users answer some survey questions to understand the why behind their cancellation (ProsperStack recommends fewer than six questions, which Match.com does), and (2)

---

<sup>26</sup> Page 5

<sup>27</sup> <https://www.jotform.com/blog/one-at-a-time-question-on-survey-form/>

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 304 of 356 PageID 11381  
presenting the questions with a retention offer.<sup>28</sup> Match.com witnesses have testified to the importance  
of the survey questions in the cancelation flow.<sup>29</sup>

50. In fact, the Match.com cancelation survey is consistent with the very standards and articles that Dr. King cites. Dr. King argues that surveys should be optional, users should not be forced to fill out a survey to unsubscribe, and that they should be “very short, one-question surveys.”<sup>30</sup> Match.com’s flow fits this description. The survey questions are optional, a user need not answer them to unsubscribe, and the optional questions asked are very short, with one question asked at a time, across two pages, just as the authorities that Dr. King cites recommend. Although Dr. King claims that the optional questions waste user time and increase cognitive load, Dr. King never quantifies this speculation, nor does she have any data to support that speculation. The fact is that the questions are optional and can be skipped in under two seconds (and even if users choose to answer the questions, the time spent is minimal).

51. Although Dr. King acknowledges that the survey questions are optional, she criticizes the flow for not including an explicit indication that the questions are optional. She even suggests adding another question asking users if they would like to complete a survey.<sup>31</sup> However, as I point out in my opening report, there is no need for an explicit indication that the survey is optional because the UI signifies and indicates the user may continue at each step; nothing is ever disabled barring or preventing the user from skipping. Additional instructions that the single interaction point on the page (i.e., the radio buttons) is optional could add noise and distraction. Including more words (such as instructions that the survey is optional)

---

<sup>28</sup> <https://prosperstack.com/blog/craft-effective-cancellation-flow/>

<sup>29</sup> Clinchy Dep. 62:10-63:9; Ginsberg Dep. 207:13-208:2.

<sup>30</sup> Page 39

<sup>31</sup> Pages 18, 44

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 305 of 356 PageID 11382  
“increas[es] [the user’s] cognitive load by having them commit it to their working memory. In other words,  
you’re making it harder for them to do their task.”<sup>32</sup>

52. Moreover, industry recommended best practice is to “...mark all the *required* fields.”<sup>32</sup> (emphasis added)  
Marking optional fields as optional, by contrast, is “not obligatory.” Since no fields are required in the  
Match.com cancelation survey, no fields are marked, the next button is enabled (i.e., not greyed out), and  
users are free to skip everything if they choose.

53. Dr. King nevertheless claims that users might believe that the survey is required because the survey uses  
radio buttons, and “...radio buttons are typically presented as an element that must be filled out and  
selected before moving forward in the user flow.”<sup>33</sup> Dr. King offers no citation or evidence to support this  
dubious claim, nor could I find any support. There is nothing inherent about using radio buttons in forms,  
surveys, or questions that hints or suggests to users that they are required to answer. Rather, radio  
buttons are used to signify the user should select only a single option.

54. Dr. King next speculates that, because some of the survey responses generate a follow-up question, users  
*may* experience “dread” that *could* cause them to abandon cancelation. This opinion is not supported by  
evidence, or logic, particularly when abandoning the flow would cause the customer to continue paying  
for a service. Nor is it supported by actual evidence from my usability study and Match.com’s actual data,  
both of which show that nearly everyone that begins the flow completes it and they are not compelled to  
abandon it due to any “dread.” It is implausible that a few optional survey questions create such a sense of  
“dread” that users are willing to abandon the flow entirely and therefore continue paying for a  
subscription if they truly wanted to cancel.

---

<sup>32</sup> <https://www.nngroup.com/articles/required-fields/>

<sup>33</sup> Page 42

55. Dr. King also takes issue with the optional open text response field that appeared in a previous version of

the flow. She opines that the field “would also have posed a challenge for users,”<sup>34</sup> because some users could have interpreted the character count *maximum* as a word count *minimum*.<sup>34</sup> Dr. King offers no support for any of this speculation, nor am I aware of any such support. In any event, that field no longer exists in the current version of the flow.

56. Ultimately, Dr. King proposes an alternate design of presenting the optional survey questions after the cancelation confirmation. While the questions could be placed just about anywhere in the flow, having them where they currently are in the flow does not make the flow *not simple*, and this is supported by the data described in my opening report. Moreover, placing the questions before cancelation confirmation very likely results in higher response rates, which benefits users by allowing Match.com to assess whether improvements to its site are helpful or necessary based on user feedback.

#### **Retention/Save Offer Page**

57. Finally, Dr. King criticizes the retention/save offer page that is presented to a subset of users, primarily because this page is inconsistent with the other pages of the flow. I understand the FTC has admitted that including a save offer in a cancelation flow does not make the flow *not simple*,<sup>35</sup> so the inclusion of a save offer alone cannot be a basis for Dr. King’s opinions. Dr. King’s real complaint seems to be the design of the save offer page, not its inclusion in the flow. Dr. King complains that the retention page uses a “different stylesheet,” different language, and a different tone compared to other parts of the flow and that a previous version of the retention page mixed links with buttons.

---

<sup>34</sup> Page 43

<sup>35</sup> FTC Second Am. Resp. to Request for Admission No. 33

58. Although the retention offer page does appear to be “...using a different stylesheet to render the

buttons...,”<sup>36</sup> I disagree with Dr. King’s speculation that “...users may have been confused...” by the different stylesheet. Dr. King cites no evidence from actual data or users that any subscriber has actually been confused by the use of a different “stylesheet,” much less that using a different stylesheet makes the flow not simple or easy.

59. The retention page’s use of slightly different language in some iterations (e.g., using “resign” rather than

“cancel”) is unlikely to confuse users, particularly given the context. In fact, usability itself, as defined by the International Standards Organization (ISO) is “the extent to which the product can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction *in a specified context of use.*”<sup>37</sup> While Dr. King looks at each feature or word choice myopically, an actual user would review the page in its larger context, considering its various elements. For example, Dr. King speculates that a user may not know what “resign” means. However, the context makes the meaning clear. The subscriber is given two options: accept the save offer (e.g., “Get 3 More Months”) or continue canceling (“No thanks, I want to resign”). There is nothing unclear about which option a subscriber should select if they want to cancel, even if a previous iteration of the retention page used the word “resign” rather than “cancel.” Similarly, even in the version of the retention page that replaced “No thanks, I want to resign” with “Continue” (which has since been replaced by “Continue Cancellation”), the context is clear. Dr. King suggests that the use of “Continue” “...creates confusion as to what task is being continued.”<sup>38</sup> But given the context of a strictly linear cancellation flow where the user has only two options (“Get 3 More Months” or “Continue”), there’s little room for ambiguity.

---

<sup>36</sup> Page 36

<sup>37</sup> <https://www.semanticscholar.org/paper/Usability-Evaluation-Scholtz/8decce5ace9235878e6aab06c3cd54f7b33a2ce> (emphasis added)

<sup>38</sup> Page 51

60. Additionally, any inconsistency in tone or language is likely to be irrelevant to users. As cited in my

opening report as well as by Dr. King, studies show that “Users won’t read your text thoroughly in a word-by-word manner. Exhaustive reading is rare...Yes, some people will read more, but most won’t.”<sup>39</sup> Any subscribers interested in canceling likely will scan, click continue, and be done quickly (as indicated by the usability study results, which show an average completion time of only 74 seconds, and actual user data, which shows an average completion time of only 44 seconds), so the subscribers are unlikely to be reading closely enough to notice any language or tone inconsistencies, much less be confused by them.

61. The version of the retention page that mixed links with buttons also was unlikely to have confused users.

As noted above, mixing links and buttons is not unusual, and all clickable items (whether buttons or links) were clearly indicated as clickable (e.g., by being rendered in blue text and underlined to indicate a hyperlink). The clickable items were labeled to indicate what each clickable item did (e.g., accept the save offer or continue cancelation).

62. Dr. King also accuses the retention page of using “confirmshaming” language, as follows: “[Username], sometimes finding love takes time. We truly believe you can find someone special on Match.com. After all, more relationships begin at Match.com than any other website. Give us another shot and we’ll give you \_\_\_\_\_ off your renewal.”<sup>40</sup> But she offers no explanation or evidence supporting her conclusion, and it is entirely unclear what standard Dr. King is using to evaluate whether something “shames” the user. In my expert opinion, I see no evidence of confirmshaming in this language, nor has Dr. King conducted any empirical analysis of users to evaluate their reaction to such language. Some better examples of confirmshaming are found on Dr. King’s dark patterns tip line, like on bestproducts.com, to opt out of their

---

<sup>39</sup> <https://www.nngroup.com/articles/f-shaped-pattern-reading-web-content-discovered/>

<sup>40</sup> Page 50

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 309 of 356 PageID 11386

notifications they give you two choices “Heck yea” or “Nope, I’m Rich.”<sup>41</sup> Another is from DuoLingo trying to get you to engage with its service, it shows a picture of a crying bird. The text reads “Language bird is crying. Learn Italian today or he will eat a poison [sic] loaf of bread.”<sup>42</sup> An example of confirmshaming language in this context for Match.com might be something like “Are you sure you want to stay single forever?” or “Fine. Stay home with your cats drinking boxed wine.” or “Don’t go! Quitters never win!” But Match.com’s language is considerate, polite, and hopeful, and presents facts and an incentive to stay. There is no guilt or shame in this language.

63. Dr. King also criticizes Match.com for presenting a couple’s success story in the retention offer, claiming that it “...is questionable as a user may be canceling their subscription for any number of reasons, including having established a ‘successful’ relationship.”<sup>43</sup> Ironically, that is exactly why the survey questions are valuable—so Match.com knows if presenting a save offer makes sense (such as if the subscriber is canceling for cost reasons), or not (such as if the subscriber is canceling because they met someone). There is nothing inappropriate or shameful about presenting a success story in an attempt to encourage subscribers to continue to try to find their own success on the site.

64. Overall, although the style of the retention page is somewhat different from other pages in the cancelation flow, that does not make the overall flow unusable, much less indicate that the flow is not easy or simple.

---

<sup>41</sup> <https://darkpatternstipline.org/sightings/confirmshaming-tumblr-com/>

<sup>42</sup> <https://blog.mobiversal.com/dark-patterns-or-how-ux-exploits-the-user-confirmshaming.html>

<sup>43</sup> Page 50

65. In fact, actual Match.com analytics proves the point. Of the 13,900,434<sup>44</sup> subscribers that entered the cancelation flow from 2013 through 2022, 12,994,428 successfully resigned online,<sup>45</sup> and another 275,353 took a save offer.<sup>46</sup> This is a cancelation “success” and retention rate of 95.46%, meaning only 4.54% of subscribers did not cancel after entering the flow (either because they never intended to cancel, could not cancel, or chose not to cancel).<sup>47</sup> As described in my opening report, it is impossible to know what portion of these remaining 4.54% of subscribers intended to cancel but did not. Some may have been just exploring. Some may have been trying to trigger a save offer. Or some may have entered the flow with the intention to cancel but simply changed their mind. It is not uncommon for a subscriber to change their mind even after canceling. For example, Match.com data shows that from January 2013 through December 2022, 334,594 subscribers successfully canceled but then later reactivated their subscription before it expired and renewed for another term,<sup>48</sup> so it is reasonable to expect that some subscribers who entered the flow with the expectation of canceling may have changed their minds before completing the cancelation. In short, these statistics do not show any defect in the cancelation flow. To the contrary, they constitute a clear story of success from a usability perspective.

## II. Dr. King’s Version of a Nielsen Usability Heuristics Analysis Is Flawed

66. I disagree with the substance of Dr. King’s conclusions regarding usability heuristics and their application to Match.com’s online cancelation flow. Dr. King opines that Match.com violates three “principles of

<sup>44</sup> Sum of column C in MATCHFTC846468

<sup>45</sup> Sum of column E in MATCHFTC846468. This does not account for subscribers who entered the online cancelation flow but resigned via an alternative method or whose subscriptions ultimately were not renewed for a different reason (e.g., billing failure).

<sup>46</sup> Sum of column G in MATCHFTC846468

<sup>47</sup> Even using session-level data rather than subscriber-level data, approximately 85% of sessions that hit the cancelation flow result in a cancelation within that session, not accounting for any save offer takers. See MATCHFTC846518 (sum of column F divided by sum of column D).

<sup>48</sup> MATCHFTC846512 (sum of column C)

website usability ... in a manner that *could* lead to customer confusion" (although Dr. King cites no

evidence that these designs *have* led to customer confusion).<sup>49</sup> I disagree with Dr. King's conclusions regarding each of these usability principles, as described in more detail below.

**Visibility of System Status:** "The design should always keep users informed about what is going on, through appropriate feedback within a reasonable amount of time."<sup>50</sup>

67. Dr. King opines that Match.com violates this usability principle due to "a lack of consistent signaling to the user each step in the cancellation process and her present place within those steps." In particular, Dr. King criticizes the "elimination of breadcrumbs" from the 2022 version of the cancelation flow and the "lack of labeling of steps."

68. First, Dr. King's emphasis on the use of breadcrumbs as a design pattern is misguided. To begin, what Dr. King apparently refers to as "breadcrumbs" are actually navigation, sub-navigation, and page titles. Dr. King correctly defines "breadcrumbs" as "a list of links representing the current page and its 'ancestors' (parent page, grandparent page, and so on), typically going all the way back to the site homepage."<sup>51</sup> In other words, breadcrumbs identify the pages that a user may have visited (though not necessarily visited) to get to the current page.

---

<sup>49</sup> Page 35 (emphasis added).

<sup>50</sup> <https://www.nngroup.com/articles/ten-usability-heuristics/>

<sup>51</sup> Page 21 n.42 (quoting <https://www.nngroup.com/articles/breadcrumbs/>).

Shop REI REI Outlet Used Gear Trade In REI Adventures Classes & Events Expert Advice Uncommon Path Membership

REI coop Shop Search for great gear & clothing Near you Open til 9pm Plano Sign In Cart

Camp & Hike Climb Cycle Water Run Fitness Snow Travel Men Women Kids Deals Brands More

**Breadcrumbs**

**Sub-navigation**

**Backpacking Tents** (103 products)

Figure 6 - REI.com

yelp Phone Repair Richardson, TX Q Yelp for Business Write a Review Log In Sign Up

Restaurants ▾ Home Services ▾ Auto Services ▾ More ▾ **Sub-navigation**

Richardson, TX > Local Services > Phone Repair **Breadcrumbs**

**Best Phone Repair near me in Richardson, Texas**

Sort: Recommended ⓘ

Search as map Gunter 289

Figure 7 - Yelp.com

69. Navigation, sub-navigation, and page titles, by contrast, may indicate the user's current location and allow the user to navigate to other pages (though not necessarily the current page's "ancestors"). The examples above illustrate sub-navigation and how it differs from breadcrumbs.

70. Previous versions (see example below) of the Match.com cancelation flow used sub-navigation to indicate the user's location and allow them to navigate to other settings pages (supporting the usability heuristic of

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 313 of 356 PageID 11390  
system status). No version of the Match.com cancelation flow that I have reviewed contains  
“breadcrumbs.”<sup>52</sup> Thus, Match.com never “eliminated” breadcrumbs.

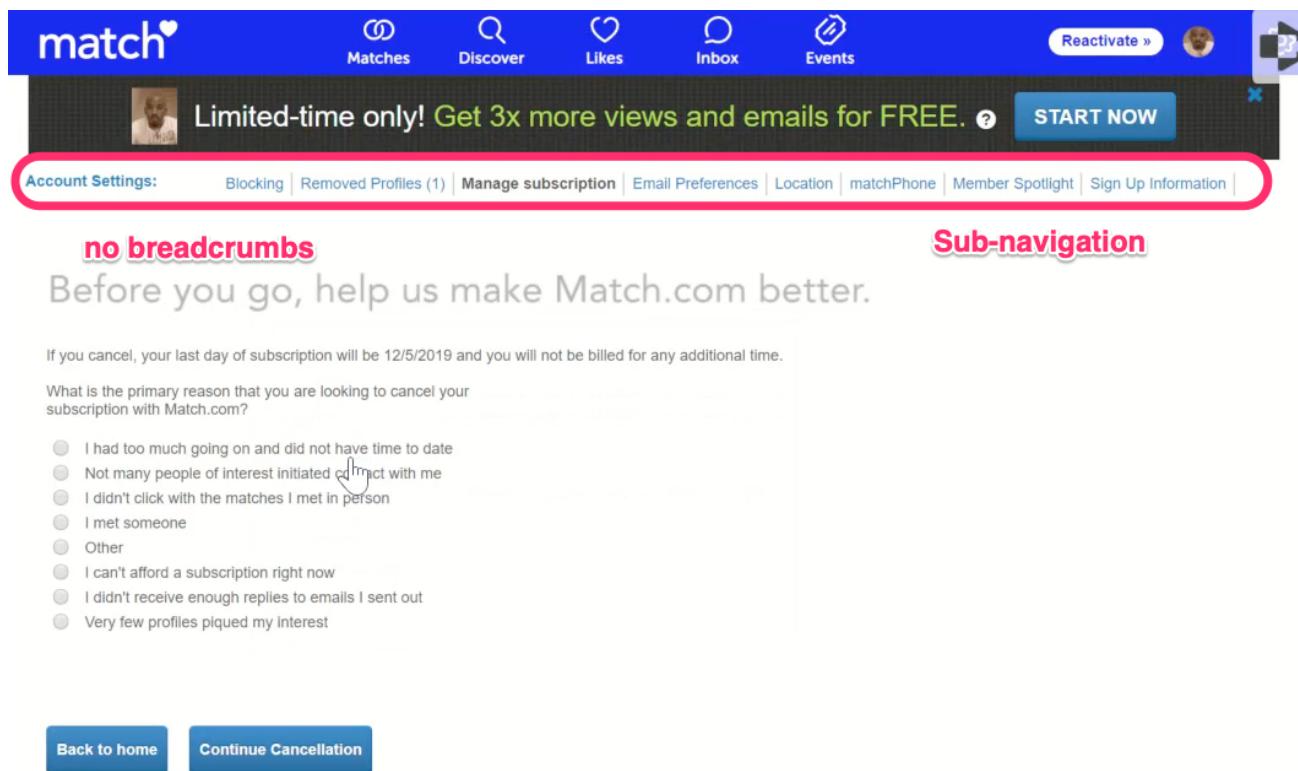


Figure 8 – Screenshot of MATCHFTC672297.mp4 including sub-navigation, but no breadcrumbs

71. In the 2022 version of the cancelation flow, the sub-navigation menu does not appear. However, the elimination of the sub-navigation menu did not impact usability. Each page of the flow continued to have a clear title or header (as described in my opening report), continuing to provide the user with a clear indication of their location, and included additional navigational buttons to return to the settings page (in addition to the ever-present settings gear that could return the user to the account settings page). Breadcrumbs and sub-navigation menus are primarily used to facilitate navigation, and their presence

---

<sup>52</sup> The fact that Dr. King seems to have misidentified a sub-navigation menu as breadcrumbs calls into question her familiarity with the site and/or her expertise.

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 314 of 356 PageID 11391  
would not serve a purpose in the cancelation process. The only relevant information for someone who wants to cancel would be the page name, which is already prominently displayed. Moreover, the absence of breadcrumbs and sub-navigation menus throughout the rest of the Match.com experience would make it inconsistent and unnecessary to suddenly introduce them during the cancelation process.

72. Second, Dr. King states “All versions [of the flow] lack a simple, clear label (e.g., “Step 3 of 5,” “Page 4 of 6”) indicating to users precisely where they are in the process...”<sup>53</sup> However, Dr. King cites no support for her apparent claim that a flow must have numerical labels to be simple, particularly where (as here) the flow is not lengthy. Once a user has declared a possible intention to cancel (by clicking “Cancel Subscription”) there are only two steps: Optional Question 1 and Optional Question 2 (except in the case of users presented with a retention screen, in which case the step total is three).<sup>54</sup> After the optional survey questions, the user reaches the cancelation confirmation screen. The trick with labeling steps is to figure out when and where such design is warranted. Based on the cancelation flows I reviewed as indicated in my opening report,<sup>55</sup> labeling steps in a cancelation flow is rare.<sup>56</sup> As Jennifer Tidwell says in her book *Designing Interfaces*, “It’s silly to have a 2-step wizard, and a 15-step wizard is tedious.”<sup>57</sup>

73. What is more, a numerical step label is unnecessary given that there are three areas of information indicating system status on both optional question steps, including (1) the main title, (2) the text content, and (3) the button labels, as described in my opening report. In fact, Dr. King admits that the “Continue

---

<sup>53</sup> Page 36

<sup>54</sup> Moreover, because the flow is not the same length for all users (as some see the retention screen and others do not), it would not make sense to number the pages because even Match.com does not know how many pages a subscriber will see when the subscriber first enters the flow. If anything, numbering the pages in light of this uncertainty would be more likely to confuse users than provide clarity. For example, stating “Page 1 of 2” could confuse users who are shown a retention offer (and therefore see three pages), whereas stating “Page 1 of 3” could confuse users who are not shown that offer (and therefore see two pages).

<sup>55</sup> See Expert Report of Brandon Ward at 31 and App’x I.

<sup>56</sup> Only the *New York Times*’s cancelation flow numbered steps (of which there were four). Amazon’s flow has what appears to be a progress bar, but not a numerical indicator.

<sup>57</sup> <https://faculty.washington.edu/farkas/HCDE%20407-2013/Tidwell-DesignPatternOnWizards.pdf>

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 315 of 356 PageID 11392

Cancellation” button (which appears on all pages of the flow in the current version) is a “signal” to the user regarding their location in the flow. The fact that additional labeling *could* be added doesn’t mean there isn’t sufficient labeling as-is and doesn’t indicate that the Match.com cancelation flow violates the visibility of system status heuristic, as Dr. King contends.

**Consistency and Standards:** “Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform and industry conventions.”<sup>58</sup>

74. Dr. King claims that Match.com’s cancelation flow violates the consistency and standards heuristic in three primary ways—(1) the retention offer page using a different stylesheet; (2) the “mixing of links and buttons” on some pages; and (3) password authentication—thus rendering the cancelation flow not easy or simple. I disagree with Dr. King’s conclusion.

75. First, although the retention offer page does appear to be “...using a different stylesheet to render the buttons...,”<sup>59</sup> I disagree with Dr. King’s speculation that “...users may have been confused...” by the different stylesheet, as described above. Dr. King cites no evidence from actual data or users. In any event, the consistency heuristic is primarily functionally focused, not aesthetically, meaning any inconsistency in the CSS or look and feel, is unlikely to actually cause consumer confusion (and Dr. King has no actual evidence to the contrary).

76. Second, the “mixing of links and buttons” does not violate the consistency and standards heuristic. As noted above, this is common and unlikely to cause confusion.

77. Finally, Dr. King claims that “[t]he arbitrary placement of a password authentication mechanism” in the cancelation flow “suggests that the password authentication was placed at this point as an obstacle for

---

<sup>58</sup> <https://www.nngroup.com/articles/ten-usability-heuristics/>

<sup>59</sup> Page 36

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 316 of 356 PageID 11393

users to access the cancellation flow.” That theory is pure speculation, without any citation to any evidence suggesting that the password authentication mechanism is intended to be a roadblock. Moreover, requiring users to reauthenticate before accessing private information has nothing to do with ensuring that users do “not have to wonder whether different words, situations, or actions mean the same thing”—the definition of the consistency heuristic. Thus, the existence of the password authentication mechanism has no bearing on this heuristic.

78. Overall, the flow as a whole has a consistent design. Once subscribers choose “Cancel Subscription” the flow is consistent and clear: Keep clicking continue until you see the confirmation screen. For most people, this means clicking the “Continue Cancellation” button twice. For some, it also includes the retention screen. With the exception of previous versions of the retention screen, the buttons are always in the exact same order, the exact same style, and the exact same location relative to the content. Additionally, engaging with any of the content is consistently optional and customers can just click continue. And while the retention screen may not be completely consistent with the other pages in the flow, the retention screen doesn’t violate standard web design principles in general, as described above.

79. Ultimately, Dr. King’s conclusions regarding the consistency heuristic and its alleged impact on the usability of Match.com’s cancelation flow are all speculative, non-specific, and unsupported by any evidence. Data from Match.com analytics, by contrast, indicates this heuristic was not violated given that 95.46% of users were able to either cancel or successfully take a save offer.

**Aesthetic and Minimalist Design:** “Interfaces should not contain information that is irrelevant or rarely needed. Every extra unit of information in an interface competes with the relevant units of information and diminishes their relative visibility.”<sup>60</sup>

---

<sup>60</sup> <https://www.nngroup.com/articles/ten-usability-heuristics/>

steps, making it far longer than necessary and subjecting its users to excess interactions that increase their cognitive load...”<sup>61</sup> In particular, Dr. King criticizes the two (optional) survey questions and the retention offer presented to a subset of subscribers.

81. Dr. King has misunderstood and misused this heuristic. The heuristic is about aesthetic design principles, i.e., the look, the feel, or the content of a screen. “...it's about making sure you're keeping the content and visual design focused on the essentials. Ensure that the visual elements of the interface support the user's primary goals.”<sup>60</sup> This heuristic has nothing to do with length or cognitive load. I've addressed in my opening report how Match.com's cancelation flow satisfies this heuristic (as properly interpreted) in many ways. While aesthetic preferences are highly subjective, from a user experience point of view the Match.com cancelation flow is relatively clean and simple, only including information and controls that subscribers require to make informed choices, as explained in my opening report.

82. Even assuming that length and cognitive load were relevant to this heuristic, I disagree with Dr. King's conclusions. Dr. King calls the process “lengthy,” but it is unclear how she defines “lengthy.” As described in my opening report, the cancelation flow is not, in fact, “lengthy” by any objective measure.

- i. The average time it took usability study participants to cancel, starting from the login screen to completion, was 74 seconds.
- ii. Based on usability study data, participants were on average able to cancel in 83.7% less time than it took to create an account and subscribe.

---

<sup>61</sup> Page 38

iii. Actual Match.com subscriber data shows that it takes on average 44 seconds to complete

the cancelation flow—four times faster than the time it takes users to merely subscribe (i.e., enter payment information, not including the time it takes to create an account).

- iv. As explained in my opening report, many other sites require at least 5 steps to cancel (steps, not clicks; actual clicks are higher), meaning Match.com's flow is consistent and unremarkable (not "lengthy") among its peers in this category.<sup>62</sup>
- v. At least four independent studies from reputable sources have concluded "...the number of necessary clicks affects neither user satisfaction, nor success rate...fewer clicks don't make users happier and aren't necessarily perceived as faster. What really counts here is ease of navigation, the constant scent of information along the user's path. If you don't make the user think about the clicks, they won't mind having a few extra clicks."<sup>63</sup> The length of a process is largely irrelevant provided the steps in that process are clear and concise. Breaking the survey into two questions for instance helps reduce cognitive load on the user, making it easier and faster for them to respond or skip than if everything was all presented on a single page at the same time. Shorter does not mean simpler.

83. Even if Match.com were to shorten the flow, it is unlikely that shortening an already-short process would have any significant effect on the flow's usability. The fact that a flow theoretically *can* be made shorter does not mean that the existing version is not easy or simple. Dr. King does not explain why she apparently believes otherwise. Rather, Dr. King seems to be trying to determine how to make the

---

<sup>62</sup> See Expert Report of Brandon Ward at 31.

<sup>63</sup> <https://uxmyths.com/post/654026581/myth-all-pages-should-be-accessible-in-3-clicks>

cancelation flow “simplest,” and not trying to determine what would be sufficient to make it merely

“simple.”

84. Dr. King does not even address the seven other Nielsen factors, presumably because they are clearly met.

The fact it is undisputed Match.com’s cancelation flow meets the majority of the Nielsen factors even in Dr. King’s estimation shows the cancelation process is simple (even if Dr. King were right about the other three factors, which she is not).

### III. Dr. King’s “Dark Patterns” Analysis Is Flawed

85. In addition to some of the Nielsen usability heuristics, Dr. King claims to have analyzed several “dark patterns” she allegedly found in Match.com’s online cancelation flow. Although I agree with Dr. King that “dark patterns”—meaning “user interfaces whose designers knowingly confuse users, make it difficult for users to express their actual preferences, or manipulate users into taking certain actions”<sup>64</sup>—are undesirable, I did not find any evidence of deceptive, manipulative, tricky, coercive, etc. practices in the Match.com cancelation flow that would make the cancelation flow not simple, nor prevent subscribers from confidently canceling their subscription. I address the specific alleged dark patterns discussed in Dr. King’s report below.

**Obstruction:** “Making a process more difficult than it needs to be, with the intent of dissuading certain action(s)”<sup>65</sup>

---

<sup>64</sup> [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3431205](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3431205)

<sup>65</sup> <https://www.nngroup.com/articles/ten-usability-heuristics/>

86. Dr. King concludes “Obstruction was used throughout the entire cancellation process...,”<sup>66</sup> pointing

specifically to password reauthentication, the two optional survey questions, and “inconsistent design.”

Dr. King’s conclusions regarding obstruction are not valid.

87. First, Dr. King appears to assume that an “obstruction” dark pattern exists any time “a process [is] more difficult than it needs to be.” If that were correct, however, then any design other than *the absolute simplest and most straightforward* design would be a dark pattern. By that definition, nearly every website would be using an obstruction dark pattern. That cannot be so since there are multiple ways to create a simple and usable website. Instead, an obstruction dark pattern exists only if the obstruction is inserted “with the intent of dissuading certain action(s).” Yet Dr. King points to no evidence (other than her own speculation) that the *intent* of the password reauthentication page, the survey questions, or the design choices were to dissuade cancelation. Moreover, Dr. King entirely ignores that “[o]bstruction often manifests as a *major* barrier to a particular task that the user may want to accomplish.”<sup>67</sup> None of the alleged “obstructions” that Dr. King identified are a major barrier, nor does Dr. King cite any evidence that they are. Each of the alleged obstructions can be overcome within seconds and is clearly labeled.

88. Second, Dr. King incorrectly suggests that Match.com uses a form of obstruction called the “Roach Motel” where “...the design makes it very easy for you to get into a certain situation, but then makes it hard for you to get out of it (e.g., a subscription).”<sup>68</sup> To begin, it is unclear how Dr. King reaches this conclusion because neither the text of Dr. King’s report itself nor the sources cited in it suggest that she has ever so much as viewed screenshots or videos of Match.com’s registration or subscription flow, much less experienced it herself. By contrast, I personally experienced the registration and subscription flow many

---

<sup>66</sup> Page 40

<sup>67</sup> <https://darkpatterns.uxp2.com/patterns-2/obstruction/> (emphasis added)

<sup>68</sup> Page 17

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 321 of 356 PageID 11398

times, as did the usability study participants. The facts and data show Match.com is the opposite of a Roach Motel. Namely, my usability study showed that study participants took a median of 453 seconds to subscribe (i.e., create an account and choose a subscription), whereas it took a median of only 74 seconds to cancel. Actual user data available from Match.com confirms that to be true; completing only the Match.com subscription purchase process (i.e., excluding registration time) takes, on average, 175 seconds to purchase a subscription, whereas it took actual users an average of 44 seconds to cancel. Moreover, the account creation process and subscription process each involve far more steps and choices than the cancellation flow. Setting up a profile involves eleven required steps and twenty-nine additional optional steps. Then the subscription process involves eleven optional steps and seven different payment plans to choose from, all of which offer various payment options. Thus, it is objectively harder to subscribe than to cancel, as shown by the usability study and actual user data. In no way can Match.com be considered a “Roach Motel.”

89. In fact, the example of a “Roach Motel” that Dr. King offers reveals the flaw in her logic as applied to Match.com. The livenation.com example—with obscured and inverted controls tricking the user into accidentally subscribing to Rolling Stone magazine, then requiring the user to physically mail a form within a restricted timeframe if they want to cancel—is a classic dark pattern. Match.com’s cancellation flow does none of that. As evidenced above and in my opening report, Match.com’s flow is literally the opposite, where subscribing requires considerably more effort than canceling. Dr. King would have known this if she had seen or experienced the Match.com subscription process.

90. Third, examining the examples of “obstruction” that Dr. King points to reveals that they are not actually obstructions at all. I addressed in my opening report and above the purpose that reauthentication and the survey questions serve—i.e., protecting security and providing valuable business information that is used to improve user experience.

91. Regardless, these elements don't prevent people from canceling and don't make the process not simple.

Data from my usability study and Match.com's own user data demonstrate that these steps add little to no friction to the process, and the (minimal) time required and success rates support this conclusion.

**Forced Action:** A design pattern "...requiring the user to perform a certain action to access (or continue to access) certain functionality."<sup>69</sup> Note this isn't necessarily a nefarious dark pattern in and of itself. A good example of forced action is a locked car. You are forced to present a matching key and unlock it before entering and then again to start and drive the vehicle.

92. Dr. King asserts reauthentication and the optional surveys are negative forced actions claiming "...there is weak, or zero, justification for the user to take the action; the point is to make the action egregious or laborious enough to disincentivize the user to complete their task."<sup>70</sup> As stated in my opening report and above, the argument is unsupported and not applicable here. There is nothing "egregious or laborious" about entering a password or asking optional survey questions, both of which have legitimate business purposes.

93. The definitive refutation of any dark pattern here is the results of the usability study, in which study participants overwhelmingly stated cancelation is simple, and even simpler than subscribing. The participants' cancelation success rate also supports that conclusion, as does Match.com's own data, showing that nearly all subscribers that click "Cancel Subscription" successfully cancel. This data shows that neither the password reauthentication page nor the optional surveys are "egregious or laborious enough to disincentivize the user to complete" the cancelation flow. It simply means the flow is secure and thorough.

---

<sup>69</sup> <https://www.nngroup.com/articles/ten-usability-heuristics/>

<sup>70</sup> Page 42

accessible.”<sup>71</sup>

94. Dr. King states “Match.com frequently hides or fails to disclose relevant information to users...I observed at least two examples of hidden information...”<sup>72</sup> The two examples Dr. King states are the optional surveys not being explicitly labeled as optional, and the findability of the cancelation process itself.<sup>73</sup>

95. I’ve already addressed the discoverability of the optional survey questions above. In short, there is nothing “hidden” about the survey questions being optional, nor does Match.com “[r]epresent[] the optional surveys are required,” as Dr. King claims. The fact that the optionality could be *more* obvious (such as using a “Skip” text button) does not make the current information “hidden.” Further, even if the survey questions were mandatory, they would still be simple.

96. Dr. King then speculates that some of the language in the cancelation flow, such as “Before you go, help us make Match.com better” or “Tell us more,” may have led “some users to believe the survey is compulsory or necessary for cancellation.”<sup>74</sup> Yet she never explains how or why that language might suggest a requirement, nor does she support her speculation with any empirical data. If anything, as explained in my opening report, the language is clear, particularly in the larger design context.

97. Regarding the findability of the cancelation process itself, that issue is addressed in my opening report. Here, I will address specific elements of Dr. King’s report. I disagree with Dr. King that “...finding the means to cancel on the website was not a simple task.”<sup>74</sup> The information architecture (“IA”) of the location of the cancelation flow is clear and representative of standard practices across the web and other

---

<sup>71</sup> <https://www.nngroup.com/articles/ten-usability-heuristics/>

<sup>72</sup> Page 18

<sup>73</sup> It is unclear how Dr. King concludes only two examples are “frequent.”

<sup>74</sup> Page 44

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 324 of 356 PageID 11401  
large websites. Additionally, I (unlike Dr. King) actually used the website rather than being shown videos or screenshots, so it is unclear how Dr. King can opine on the findability of the cancelation flow when she apparently has never attempted to do so herself. Dr. King claims, for example, that finding the flow under Settings “...required exploration by users to encounter the Account Settings option”<sup>74</sup> but again offers no supporting evidence of this claim. She did not identify any users or what “exploration” they were “required” to do.

98. Dr. King’s description of how to find the cancelation flow is also factually inaccurate. Dr. King begins by stating she is only aware of “...a single pathway to start the process...”<sup>74</sup> (though she later admits that the process is available under Help as well, as the “...help page also directs the user to the online process...”<sup>75</sup>). She then incorrectly claims that the Help pages “buried information” about cancelation, ignoring that subscribers can use the Help page search box to search at least *a dozen* different cancelation-related terms that will take the subscriber to the cancelation help page that leads subscribers **directly** to the flow, as described in my opening report.

99. Dr. King then claims that having “a single pathway” to start the process means that “failure rates could be high if users did not discover it.” To begin, Dr. King is incorrect that there is only a “single pathway” to start the process; as described above and in my opening report, subscribers can reach the cancelation flow in a variety of different ways. Additionally, with few exceptions, it’s common to only have one path to accomplish a task on the web and in software. There may be multiple paths to begin executing a task (e.g., a button, a menu option, a key command, etc.), but only a single way to do that task (e.g., all three options launch the same, singular flow). This is basic software design. As documented in my opening report, I located two direct paths to cancelation (direct, and via Help), while within Help, in addition to clicking to

---

<sup>75</sup> Page 45

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 325 of 356 PageID 11402  
the correct article, I found at least twelve additional paths to get to the Help article via searches, totaling  
at least fourteen separate pathways customers could potentially take to get to the Manage Subscription  
screen to begin canceling. There is nothing “hidden” about the cancelation flow.

100. Dr. King concludes “The discoverability of the cancellation process is buried under indirect  
settings...”<sup>76</sup> and she states “...the use of the term “settings” in the drop-down menu is ambiguous...”<sup>77</sup>  
hinting this “ambiguity” leads to difficulty finding the flow. There is no evidence the flow is buried  
anywhere, nor that getting there requires some complex “indirect” navigation. Of the ten other services I  
reviewed 100% of them began the path to cancelation in the same place as Match.com: Account/Settings.  
Of the two other services Dr. King reviewed (Coffee Meets Bagel, and Facebook Dating (which does not  
offer subscriptions)), 100% of those too began the path to cancelation on the Account/Settings page.<sup>78</sup> In  
fact, in Dr. King’s own suggested redesign, she also places the cancelation flow in the Account/Settings  
page.<sup>79</sup> Clearly, this is the best practice, and not ambiguous, buried, or indirect at all.

101. Dr. King continues “...on the Account Settings page, there is no mention of cancellation...”<sup>77</sup> Upon  
review of the available options, it’s clear there is only one logical place a customer could go to cancel, and  
the data in my opening report confirms this. It’s worth noting that in some versions of the site before the  
2022 version (see MATCHFTC761906.mp4), the word cancel was included in the label, but it’s doubtful  
the removal of that word had much if any effect on the success rate of cancelations, as the success rate  
after removing it continues to be very high (91.5% in my study, and even higher in Match.com data).

102. Moreover, Dr. King’s speculation about whether subscribers *might* have found it difficult to find  
the cancelation flow for any of the various reasons she lists is not only unsupported but is also

---

<sup>76</sup> Page 4

<sup>77</sup> Page 44

<sup>78</sup> Page 64

<sup>79</sup> Page 58

**98.78% of participants (162 of 164) were able to locate the Manage Subscription page and continue with their cancelation process, disproving Dr. King's hypothesis that subscribers intending to cancel had difficulty finding the flow.**

**Content Strategy:** "Content strategy and copywriting refer to the actual language and word choices within a software application (app) or product."<sup>80</sup>

103. Dr. King claims that Match.com's "content strategy and copywriting...contributed to user confusion within the cancellation flow."<sup>81</sup> But Dr. King again offers no data to support that assertion. Without evidence, this is mere conjecture. Moreover, as discussed in more detail below, the specific items that Dr. King identifies as inconsistent or confusing are not.

104. **Inconsistent Language:** First, Dr. King asserts that "...Match.com used inconsistent language throughout the cancellation process..."<sup>82</sup> The only "inconsistencies" she identifies, however, are on a single page of the flow (the retention offer page, which only a subset of subscribers see), not "throughout" the flow. Moreover, Dr. King never explains how "switching from third person to first person," for example, would make a subscriber confused about whether they had successfully completed cancelation. As described above, "inconsistent language" on a single page is unlikely to cause any confusion, particularly in context. The fact that Dr. King might have chosen different words or phrases does not mean that the current version is not simple, nor is there any evidence to support that assumption. Inconsistency in language or content does not equate to something being difficult to find or do, and Dr. King's report does

---

<sup>80</sup> <https://www.nngroup.com/articles/ten-usability-heuristics/>

<sup>81</sup> Page 45

<sup>82</sup> Page 46

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 327 of 356 PageID 11404  
not show otherwise. The data, by contrast, indicates that the flow is both easy and simple to find and complete, as evidenced by the high success rate in my usability study (91.4%) and from Match.com's data.

105.       **Confirmshaming:** "...the act of guiltling the user into opting in to [sic] something. The option to decline is worded in such a way as to shame the user into compliance."<sup>83</sup> and "...using language and emotion (shame) to steer users away from making a certain choice."<sup>84</sup>

106.       Dr. King concludes the retention offer used confirmshaming with its language and presenting a couple's success story. As described above, I disagree that there is anything "shaming" about the retention page.

107.       **Confusing Terminology:** Dr. King next states that Match.com uses confusing terminology.

108.       First, she claims that the retention page's past use of "resignation" (rather than cancelation) or a "Continue" button (rather than "Continue Cancellation" button) created confusion. However, she fails to identify any actual users or evidence to support these claims. As described above, this language is clear in context. In any event, the "resign" link on the retention page was changed to a "Continue" button in 2018, and the "Continue" button was changed to a "Continue Cancellation" button in 2019. So to the extent "resign" or "Continue" was confusing (they were not), that confusion has been eliminated.

109.       Dr. King next claims that the "Before you go" headline may have "misled some users to believe that this was the final step in the cancellation process." As explained in my opening report, I disagree. The headline on its own is clear that the subscriber has not yet completed cancelation (because the subscriber has not yet "gone"), a conclusion that is reinforced by other language on that page, as elaborated on in my

---

<sup>83</sup> Page 48

<sup>84</sup> Page 49

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 328 of 356 PageID 11405  
opening report. That interpretation is consistent with data from my usability study and Match.com's data, which shows nearly all subscribers advanced past this page and successfully canceled.

## VII. RESPONSE TO DR. KING'S PROPOSED ALTERNATIVE DESIGN

110. Dr. King concludes her report by putting her heuristic analysis into "perspective" based on "company documents" and "competitor practices," and then proposing an alternative design. There are two problems with this. First, her proposed alternative design is not simpler or better than Match.com's existing flow. Second, even if it were, that would mean nothing. Every website or process could theoretically be simpler. But that does not mean the existing process is not already simple.

111. First, Dr. King cites a handful of documents in which Match.com employees proposed re-designs of the cancellation flow or suggested critiques of the flow based on alleged consumer complaints. Dr. King claims that the "existence of customer complaints" supports her opinion that Match.com's flow is not simple. The fact that complaints exist, however, is not proof that a site is not usable. It is impossible to design a site that satisfies every user.<sup>85</sup> Dr. King does no empirical analysis to show that a significant percentage of customers actually complained about the cancellation flow, and certainly, none showing that a meaningful number complained that it was not simple. Additionally, Dr. King is misconstruing some of those company documents. For example, one witness testified that when she referred to "complaints," she meant "an internal word for members calling," not necessarily complaining about the cancellation flow being not simple.<sup>86</sup>

---

<sup>85</sup> <https://www.linkedin.com/pulse/idea-you-can-design-everyone-myth-rekha-bhavsar/>

<sup>86</sup> Clinchy Dep. 75:4-19; see also Auderer Dep. 240:1-5.

112. Moreover, Dr. King apparently did not review any actual customer complaints to understand what exactly the customers were complaining about—as none are in the data cited in her report. Instead, she appears to have relied on unverified second or third-hand mentions of some number of customer complaints by former Match.com employees. Even those employees admit to not having enough data to substantiate their assumptions stating “...I can dig up some data if needed.”<sup>87</sup> Furthermore, in reality, complaints about the online cancelation flow are a small minority of Match.com’s customer care contacts, according to a former Vice President of Customer Support at Match.com.<sup>88</sup>

113. What is more, good UX design does not rely on anecdotes from customer complaints; it relies on data. And the actual data in this case—both from Match.com’s actual user data and my usability study—demonstrates that the vast majority of subscribers can successfully cancel their subscriptions via the online flow, regardless of what some former Match.com employees may have speculated.

114. Dr. King next compares Match.com’s online cancelation flow to “competitor practices,” but the other sites on which Dr. King relies are not comparable. Dr. King does not explain how she chose the “competitors” to which to compare Match.com’s online cancelation flow. As explained in my opening report, I examined numerous other subscription sites and came to a different conclusion, as I found that the elements of Match.com’s cancelation flow are common across other sites. The fact that Dr. King found two examples of other (non-comparable) sites that do not have all the same elements as Match.com’s cancelation flow does not prove that Match.com’s flow is not simple.

---

<sup>87</sup> MATCHFTC320168

<sup>88</sup> See Watson Dep. 156:2-7 (explaining that “I thought I cancelled” contacts were on average 50-60 people per month, “which is 1 percent maybe of the volume that we would receive on a monthly basis”); 195:4-8 (“Q. Would you agree that generally speaking, Match in general during this time period received a lot of complaints from members who stated they cancelled on the site and it didn’t work? A. No.”).

115. What is more, the “competitors” that Dr. King chose are not comparable to Match.com in varying ways, making Dr. King’s comparison unhelpful.

116. **Facebook Dating** is a completely free service, meaning there is no paid “subscription” to cancel, and it is available only via an app (not on a desktop computer or mobile web). Because Facebook Dating is entirely free,<sup>89</sup> what Dr. King appears to be describing is deleting an entire account, rather than ending a paid subscription. It makes sense that a flow to cancel a paid subscription is different from a flow to delete a free account (e.g., because the latter doesn’t have financial implications). For example, it is not surprising that Facebook Dating’s flow does not include a save offer (i.e., offering a discounted subscription), because the service is already free so there is nothing to discount. Moreover, Facebook Dating is a minor part of Facebook’s overall service, meaning collecting feedback from users about why they are deleting their dating accounts is less important because it affects a much smaller subset of Facebook’s overall users and business (as deleting a Facebook Dating account does not delete the user’s entire Facebook account). The very purpose of Match.com, by contrast, is to help users find a match, so it is far more important for Match.com to know whether its subscribers are satisfied and therefore whether it needs to make adjustments to improve the experience for its remaining subscribers.

117. **CoffeeMeetsBagel** is also not comparable to Match.com. Like Facebook Dating, CoffeeMeetsBagel also is available only on an app (not on a desktop computer or mobile web). Importantly, that means that all billing and subscription cancelations are managed through the Apple App Store or Google Play, depending on the user’s device.<sup>90</sup> Again, what Dr. King appears to be describing in her report is deleting

---

<sup>89</sup> Rather than selling subscriptions, Facebook makes much of its revenue through targeted advertising, which has led to consumer privacy issues resulting in FTC action and a \$5 billion penalty. <https://www.ftc.gov/news-events/news/press-releases/2019/07/ftc-imposes-5-billion-penalty-sweeping-new-privacy-restrictions-facebook>. It strikes me as odd that Dr. King relies on such a company as a good example, its irrelevance notwithstanding.

<sup>90</sup> <https://coffeemeetsbagel.zendesk.com/hc/en-us/articles/1500002587001-How-do-I-turn-off-auto-renewal-or-cancel-my-subscription->

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 331 of 356 PageID 11408  
a user's free account, not canceling a paid subscription. As noted above, there are good reasons for those flows to be different and also explains why the "delete account" flow does not contain a save offer (because there is no discount to offer on an already-free account).

118. Even the comparison itself is not comparable. Throughout her report, Dr. King describes and opines about the *desktop* version of Match.com's cancelation flow (i.e., the version a user would see if they used a laptop or desktop computer to visit Match.com). Yet Dr. King admits in a footnote that the "competitor flow" reviews "...were conducted on the mobile versions of these services."<sup>91</sup> Usability considerations can be very different in the desktop versus mobile context, so comparing flows across services in those two different contexts makes little sense. "When you test a mobile product with users, you need to examine that product in the right context because the mobile environment isn't the same as the traditional desktop environment."<sup>92</sup> Moreover, it is unclear whether Dr. King experienced these "competitor flows" herself or is relying on screenshots and videos taken by others, as she is with the Match.com flow. If the former, it is unfair to compare actual experience to screenshots and videos (and begs the question why Dr. King was willing to experience the "competitor flows" herself, but not Match.com's flow). If the latter, her heuristic analysis of the "competitor flows" suffers from the same deficiencies as her analysis of the Match.com flow.

119. Moreover, putting aside the lack of comparability, Dr. King identifies "friction" even in these "competitor" flows, but it is unclear what point Dr. King is trying to make. If the point is that the "competitor" flows are "easy" and "simple" to use and find (unlike Match.com's, according to Dr. King), then even "easy" and "simple" flows have friction, according to Dr. King's characterizations. But Dr. King never explains what standard she is using to determine at what point a flow crosses the line from "easy"

---

<sup>91</sup> Page 62, footnote 99

<sup>92</sup> <https://www.interaction-design.org/literature/article/mobile-usability-research-the-important-differences-from-the-desktop>

Case 3:19-cv-02281-K Document 219 Filed 10/02/23 Page 332 of 356 PageID 11409  
and “simple” to not. For example, how much friction is too much? Dr. King never says. If the point is that the competitor flows *also* are not easy or simple because they also use friction, however, then it is unclear what value there is in comparing Match.com to those sites (or whether **any** flow other than the easiest or simplest would ever meet Dr. King’s exacting standards).

120. In any event, the fact that shorter flows exist on other (non-comparable) sites, or that other flows have fewer alleged friction points or dark patterns, does not mean that Match.com’s cancelation flow is not easy or simple. There are many ways for a flow to be easy or simple, without the flow being the easiest or the simplest. Thus, Dr. King’s comparison to competitor flows is not helpful in determining whether Match.com’s flow is easy or simple, other than acknowledging that these alleged “frictions” are common and therefore unlikely to mislead or confuse users.

121. Finally, Dr. King’s proposed “condensed” flow of three steps—(1) click settings, (2) click cancel, (3) click confirm—would be highly unusual in comparison with the same flows on comparably large websites, and could introduce accidental cancelations, malicious or prank cancelations, and other errors and issues not covered here. In my review of ten other large websites with subscription services, I found that eight required five or more steps to cancel, eight included a survey, seven included an observed retention prompt, and three included reauthorization to proceed.<sup>93</sup> Match.com’s process is not unusual, overlong, or in need of a major overhaul as Dr. King suggests. It is standard and therefore should be familiar to subscribers. Dr. King might believe her proposed version to be simpler than Match.com’s current flow, but Dr. King never explains why a flow other than her proposed “condensed” flow is not “simple.”

---

<sup>93</sup> See Expert Report of Brandon Ward at 31.

above and in my opening report, the number of steps in a process is not an indicator of simplicity.

Sometimes more steps mean less friction and improved usability.

123. Additionally, this kind of design exploration ignores the complexities of designing websites for businesses (especially large e-Commerce websites), including necessary trade-offs. For example, a cancelation flow without a password reauthentication page might involve fewer steps, but a higher risk of unintentional or fraudulent cancelations. Or putting “Cancel Account” directly within Settings might decrease the number of steps but result in more options on the Settings page, making the Settings page overall less usable. Or removing the retention offer page might make the flow shorter, but it removes an opportunity for subscribers who want a continued subscription at a decreased price to take that offer, ultimately decreasing consumer good. Anyone can “armchair” redesign anything they want, but Dr. King has no evidence her proposed alternative would be any more or less simple than the current or past iterations, nor any evidence as to why similar proposals were not implemented at Match.com. It’s all conjecture without evidence. All evidence to date indicates Match.com’s flow is simple and easy to find and execute.

## VIII. CONCLUSION

### I. Summary of key rebuttal points

124. Dr. King’s report is unreliable due to several limitations and flaws in her methodology.

125. First, Dr. King relied solely on an analysis of screenshots and videos and did not attempt the process herself or observe any substantial group of objective users. As a result, her conclusions about user experience are based on speculation and lack supporting data or evidence.

ignored key factors relevant to the process. Without any external, objective input or insight into her process, her conclusions are mere speculation.

127. Third, Dr. King relies heavily on a small set of usability heuristics that are open to interpretation and subject to diverging from real-world user experience. She also provides no objective justification for her choices of which standards or guidelines to apply and which to ignore.

128. Finally, her report contains some factually inaccurate analyses leading her to misapply some heuristics and come to erroneous conclusions.

129. Overall, Dr. King's report is unreliable as an objective report on reality and does not provide a valid basis for the conclusion on the findability and ease of use of the cancellation process on Match.com.

## II. Summary of my position

130. As stated in my opening report, in my professional opinion, the Match.com online cancellation process is simple, clear, and efficient. It is accessible through common icons, with clear labeling and a logical, brief path. My analysis shows it meets Nielsen's usability and simplicity heuristics and the 5 quality components of usability.

131. The results of my empirical usability study showed that, of participants tasked with subscribing then canceling on Match.com, **98.78% successfully found Manage Subscription**, the entry point to canceling, **91.5% successfully canceled** with an average time of **74 seconds**, on average **6.1 times faster** than subscribing, making it even easier than the signup process. Match.com received an "**A Grade**" (**81.6**) on the System Usability Scale. Additionally, actual Match.com user data also supports this, with a **95% success rate** and a median cancellation time of **44 seconds**, which is quite a bit quicker than the subscription process.

132. The study participants agree that Match.com's cancellation flow is simple:

- a. **88.3% of participants thought canceling was simple** or were at least neutral as to the simplicity/difficulty.
- b. **84.7% of participants thought canceling was at least as simple as signing up.**

133. With respect to Dr. King's initial query, the data indicate, and I must therefore conclude:

- a. Was Match.com's cancelation process easy to use? **Yes.**
- b. Was Match.com's cancelation process easy to find? **Yes.**

DATED: May 15, 2023



Brandon E.B. Ward

## EXHIBIT A

### Curriculum Vitae of Brandon E.B. Ward

#### **BRANDON E.B. WARD – CXO, EXPERIENCE DESIGN LEADER/SPEAKER/EDUCATOR**

[brandoneward.com](http://brandoneward.com) • brandonward@precocityllc.com

I seek executive design leadership opportunities where the people using the product are at the heart of the business.

My career has included designing experiences, leading, speaking, teaching, writing, and directing; creating and developing unique, award-winning, and usable software, mobile apps, websites, and AR/VR experiences.

I hold a master's degree in Interactive Media Design and 3 Bachelor's degrees in Music and Theatre.

### SKILLS

**LEADERSHIP** Team building, Mentoring, Management, Product, Scrum, Speaking, Teaching

**DESIGN** UX/UI/Service, Web, Sound, Instructional, Graphic, Product

**PRODUCTION** Software, Web, Mobile, Graphic, Audio, Video

**LANGUAGES** English, Cebuano, Hiligaynon, Tagalog

### EXPERIENCE

**PRECOCITY** – Chief Experience Officer (CXO), Senior Director of User Experience 2016 - Present

I lead the UX efforts both internally and as a consultant. I work closely with the executive team to define Precocity's UX practice, methods, tools, ethos, and culture. As a consultant, I execute these philosophies and practices for a variety of clients, from research and testing to UX/UI design to audio and video production. I was in charge of sourcing, interviewing, and hiring consultants and executives, as well as mentoring the UX/UI teams. I coordinate with the heads of the Data Science and Engineering departments to align our visions to ensure a cohesive, comprehensive, data-driven design offering.

- Designed, led, and executed Toyota's first usability research initiatives across their in-car and mobile software experiences, helping change how Toyota approaches software projects globally

- Worked closely with the executive team to attract, pitch, and land new business, write proposals, and statements of work
- Authored and designed Precocity's branded design process IDEA
- Authored, designed, and built Precocity's branded redesign process and tool EVO
- Represented Precocity at various conferences, networking, building new client relationships
- Consulted with small, medium, and Fortune 10 clients – Research, Information Architecture, UX/UI/Graphic Design, Rapid Prototyping, Usability Testing, Design Studio, Planning, Brainstorming, and Workshops

**SERVICE DESIGN NETWORK - DALLAS** – Founder & Host      2018 - Present

Co-founded this meetup, in-person and virtual. Grew to 1785 members in 2 years.

**IMPACT UTAH** – Chief Experience Officer (CXO)      2015 - 2023

I helped drive the service, experience, and brand design of iMpact Utah, and its holding companies. We offer best-in-class management consulting across a variety of industries.

**SOUTHERN METHODIST UNIVERSITY** – Instructor      2015 - Present

I teach User Experience Design, and Service Design as part of CAPE's design/development certificate programs.

**IMPROVING ENTERPRISES** – Senior Experience Designer      2013 - 2015

As a senior consultant for Improving Enterprises, I represented Improving's UX and Design interests for select clients. I worked both on-site and remotely with them, investigating their current and future products and services. I conducted user research and usability tests and designed wireframes, prototypes, and mockups based on that research. I worked closely with leadership across all teams, including the C-suite, both client-side and within Improving.

- Worked closely with executives, product ownership, and development to ensure quality and correct results
- Major point of contact between client executives and Improving Enterprises
- Conducted user research and usability tests for both new and redesigned projects

- Lead tool and process training
- Spoke at industry conferences
- Hosted user groups and meetings on behalf of Improving Enterprises

**STUDIOGOOD** – Director of UX/UI 2013

Lead the company in a shift from social to a digital agency and establish user experience as a core practice. Along with the leads from development and account management, I lead the development and implementation of a new responsive workflow process to build efficiencies while producing responsive websites, microsites, and Facebook tabs. Some projects required concept-to-execution turnaround in as little as 5 days.

- Helped establish a new responsive, agile design/development process for producing responsive websites.
- Lead brainstorming sessions for idea generation for client pitches, and social and marketing strategies
- Interviewed and counseled every person in the company as to what was wrong and how we could fix it - instituted changes to help with major issues, and morale.
- Coordinator for design and development teams, ensuring team parity during the lifetime of the project.
- Designed social graphics, posts, and media for major brands.
- Designed responsive websites, Facebook Tabs, and microsites (wireframe, UI, layout, graphics, icons)
- Established regular brown-bag meetings where members of the team could share new ideas and skills with the rest of the company
- Built and established usage of a central company Wiki, taught teams how to use it

**TRIGEO/SOLARWINDS** – Director of UX/UI, Lead/Senior Developer 2009 - 2013

I lead the front-end team in the design and implementation of all features and fixes, including front-end development. At TriGeo, I helped completely redesign and launch our most successful product release ever (from UX to icons, to GUI, to packaging) leading to a record year for the company and a key factor in the company's acquisition in 2011 by SolarWinds for \$35 Million.

- Hired, built, and lead a new UX/UI Team of 6 developers and designers

- Designed and developed interaction flow, icons, color schemes, and palettes, dynamic dashboards, custom search, and query interfaces, reporting tools, labels, packaging, marketing materials, and more.
- Oversaw rebranded and updated product for release just 1 month after acquisition
- Wrote many custom components, and established coding best practices and standards.

**BRAINBOX ENTERTAINMENT** – Senior Designer & Flex Developer 2008 - 2009

Contracted to bridge the gap between design and development for a new online customer-facing sporting platform (kronum.com). Helped lead the project in terms of development, scope, communication, art preparation, skinning, themes, and more.

**DELVE NETWORKS** – Senior UX & UI Designer 2008

UX/UI Designer for the front and back-end applications of this startup focused on video search. Quickly learned new skills to take on additional design implementation development roles to augment the team.

**MEDIAPRO** – Development Coordinator, UI Designer/Developer 2005 – 2007

Contracted as Flash developer and quickly brought on full-time to multiple projects for graphic design, video and audio consultation, and voice-over talent. Soon advanced to full-time development coordinator. Trained 2 new developers and oversaw their progress. Highly sought-after designer/developer for internal projects for clients like American Express and Microsoft.

**STAFFING TOOLS** – Director of Production 2000 – 2004

UI design, MM Director, and Flash development of training and testing for digital design tools

## TALKS

- UX Without the U is Your X
- Ethics Ex Machina: Designing the Future with a Conscience
- In Case of Emergency, Break Taboo
- The Triforce of UX: How to Hire a Great UX Designer
- Service Design: Your Next Career Move
- Designing a Great Experience: The ROI of UX

- Project Operation: Improving complex systems w/out killing the patient
- UX As a Service: 5 Strategies to Elevate Design Thinking in Your Organization

## EDUCATION

### **Master of Science in Interactive Media**

Indiana University, Bloomington // 2004

Taught Video Production and Non-linear Video Editing 101

### **B.A., multiple degrees in Vocal Performance, Music Theory and Composition and Theatre**

Dean's List, Cum Laude

College of Idaho, Caldwell // 2000

**In the Matter of:**

**FTC v. Match Group, Inc., et al.**

*June 22, 2023  
Dushyant Saraph*

**Condensed Transcript with Word Index**



For The Record, Inc.  
(301) 870-8025 - [www.ftrinc.net](http://www.ftrinc.net) - (800) 921-5555

1  
2 IN THE UNITED STATES DISTRICT COURT  
3 NORTHERN DISTRICT OF TEXAS  
4  
5 FEDERAL TRADE COMMISSION,  
6 Plaintiff,  
7 vs. Index No.  
8 MATCH GROUP, INC, a corporation, 02281-K  
and MATCH GROUP, LLC, formerly  
9 known as MATCH.COM, LLC, a  
limited liability company,  
10 Defendants.  
11 -----  
12  
13 DEPOSITION OF DUSHYANT SARAPH  
14 New York, New York  
15 Thursday, June 22, 2023  
16  
17  
18  
19  
20  
21 Reported by:  
Jeremy Frank, MPM  
22 JOB NO. 2172  
23  
24  
25

1 A P P E A R A N C E S:  
2  
3 FEDERAL TRADE COMMISSION  
4 Attorneys for Plaintiff  
5 1999 Bryan Street, Suite 2150  
6 Dallas, TX 75201  
7 BY: REID TEPFER, ESQ.  
RTepfer@ftc.gov  
M. HASAN AIJAZ, ESQ.  
Maijaz@ftc.gov  
(214) 979-9350  
8  
9  
10  
11  
12  
13 SIDLEY AUSTIN LLP  
14 Attorneys for Defendants  
15 1501 K Street, N.W.  
16 Washington, DC 20005  
17 BY: BEN MUNDEL, ESQ.  
BMundel@sidley.com  
18  
19  
20  
21 ALSO PRESENT:  
22 SAMUEL KITCHENS, Esq.  
ERICA HILLIARD  
CHELSEA PRIEST  
JEANETTE TECKMAN  
23  
24  
25

1  
2 June 22, 2023  
3 9:21 a.m.  
4  
5 Deposition of DUSHYANT SARAPH, held at  
6 the offices of Sidley Austin, 787 Seventh  
7 Avenue, New York, New York, pursuant to  
8 Notice, before Jeremy Frank, a Stenographic  
9 Court Reporter and Notary Public of the State  
10 of New York.  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

2  
3 I N D E X  
4  
5 WITNESS EXAMINATION PAGE  
6 MR. SARAPH MR. TEPFER 8  
7  
8 EXHIBITS  
9 EXHIBIT DESCRIPTION PAGE  
10 1 FTC 774671, video deemed  
Marked 12  
11 2 FTC 672329, video deemed  
Marked 31  
12 3 MATCHFTC 752776 38  
13 4 MATCHFTC 782186 60  
14 5 MATCHFTC 761906, video deemed  
Marked 73  
15 6 MATCHFTC 751483 89  
16 7 MATCHFTC 751484 89  
17 8 MATCHFTC 672309, video deemed  
Marked 102  
18 9 MATCHFTC 846944, Excel  
Spreadsheet deemed marked 121  
19  
20  
21  
22  
23  
24  
25 (Index continued)

<p>1 subscriber. And it seems like it says 2 false so we are looking at subscriber 3 sessions. 4 <b>Q. True would be a free trial?</b> 5 A. I would assume so, yes. 6 <b>Q. So do you know what date part is</b> 7 <b>in column B?</b> 8 A. It looks like the year in which 9 the data was pulled for. 10 <b>Q. What about date part, this other</b> 11 <b>date part in column C?</b> 12 A. Column C looks like the month of 13 that year. 14 <b>Q. And then column D is sessions</b> 15 <b>hitting resign flow; what does that</b> 16 <b>mean?</b> 17 A. I think the number of total 18 sessions where a user hit the resign 19 flow. 20 <b>Q. What does it mean to hit the</b> 21 <b>resign flow?</b> 22 A. This to me, can we go to, give 23 me one second, I want to make sure I 24 have the right -- 25 <b>Q. No worries, I'll hold off.</b></p>	<p>125</p> <p>1 <b>Q. That's exclusively?</b> 2 A. I'm trying to recall if this is 3 exclusively online or if it includes 4 other sources of cancellations. 5 <b>Q. Our understanding was this is</b> 6 <b>not exclusive to the online cancel-</b> 7 <b>lation flow.</b> 8 <b>Is that accurate?</b> 9 A. That sounds correct. 10 <b>Q. So looking at column F it says,</b> 11 <b>"Sessions resigned online in session or</b> 12 <b>five minutes post."</b> 13 <b>What does this column mean?</b> 14 A. This looks to be exclusively 15 users who resigned using the online 16 cancellation flow, column E, for 17 example, is resigned using any method, 18 and column F is specifically the online 19 method. 20 <b>Q. I see.</b> 21 <b>In column G it says, "Sessions</b> 22 <b>resigned via care in session or five</b> 23 <b>minutes post."</b> 24 <b>Would you mind telling me what</b> 25 <b>that is.</b></p>
<p>1 A. My understanding is sessions 2 hitting resign flow are the sessions 3 that hit the password page that we 4 mentioned earlier. 5 <b>Q. So sessions hitting resign flow</b> 6 <b>are folks that see the password page or</b> 7 <b>continue past it?</b> 8 A. My understanding is that they 9 saw the password page. 10 <b>Q. So looking now at column E it</b> 11 <b>says, "Session resigned in session or</b> 12 <b>five minutes post."</b> 13 <b>What does that mean?</b> 14 A. These are sessions where the 15 user resigned in that session or they 16 resigned in that session but it was, 17 the logging happened five minutes 18 later, and this has to do with how the 19 data gets logged is my understanding, 20 so these are all folks that resigned 21 during that flow. 22 <b>Q. But it is still people who</b> 23 <b>resigned in the online cancellation</b> 24 <b>flow?</b> 25 A. Yes.</p>	<p>126</p> <p>1 A. Column G should be a subset of 2 column E, it is basically users who 3 resigned and did so through reaching 4 out to our care team. 5 <b>Q. And column H says, "Sessions of</b> 6 <b>users who took save offer in session or</b> 7 <b>five minutes post."</b> 8 <b>Do you know what that means?</b> 9 A. This looks like the user 10 sessions who took and accepted a save 11 offer. 12 <b>Q. Then looking at column I,</b> 13 <b>"Sessions where user did not resign or</b> 14 <b>take save offer in session or five</b> 15 <b>minutes post session."</b> 16 <b>Do you know what that means?</b> 17 A. These basically are sessions 18 where the user did not end up resigning 19 or taking a save offer. 20 <b>Q. And looking at column J,</b> 21 <b>"Sessions where user did not resign or</b> 22 <b>take save offer in session or within</b> 23 <b>five minutes post session and user</b> 24 <b>renewed."</b> 25 A. Sounds like the user did not</p>

357

1 CERTIFICATE  
2  
3 STATE OF \_\_\_\_\_ :  
4 COUNTY/CITY OF \_\_\_\_\_ :

5  
6 Before me, this day, personally appeared  
7 DUSHYANT SARAPH, who, being duly sworn, states  
8 that the foregoing transcript of his  
9 Deposition, taken in the matter, on the date,  
10 and at the time and place set out on the title  
11 page hereof, constitutes a true and accurate  
12 transcript of said deposition.

13  
14 DUSHYANT SARAPH  
15  
16 SUBSCRIBED and SWORN to before me this  
17 \_\_\_\_\_ day of \_\_\_\_\_, 2023, in the  
18 jurisdiction aforesaid.  
19  
20  
21  
22  
23  
24 My Commission Expires \_\_\_\_\_ Notary Public  
25

359

1 INSTRUCTIONS TO WITNESS  
2  
3 Please read your deposition over  
4 carefully and make any necessary corrections.  
5 You should state the reason in the appropriate  
6 space on the errata sheet for any corrections  
7 that are made.  
8 After doing so, please sign the errata  
9 sheet and date it.  
10 You are signing same subject to the  
11 changes you have noted on the errata sheet,  
12 which will be attached to your deposition. It  
13 is imperative that you return the original  
14 errata sheet to the deposing attorney within  
15 thirty (30) days of receipt of the deposition  
16 transcript by you. If you fail to do so, the  
17 deposition transcript may be deemed to be  
18 accurate and may be used in court.  
19  
20  
21  
22  
23  
24  
25

358

1 C E R T I F I C A T E  
2 STATE OF NEW YORK )  
3 : ss.  
4 COUNTY OF NEW YORK )

5 I, Jeremy Frank, a Notary Public within  
6 and for the State of New York, do hereby  
7 certify:  
8

9 That DUSHYANT SARAPH, the witness whose  
10 deposition is hereinbefore set forth, was duly  
11 sworn by me and that such deposition is a true  
12 record of the testimony given by the witness.  
13

14 I further certify that I am not related  
15 to any of the parties to this action by blood  
16 or marriage, and that I am in no way  
interested in the outcome of this matter.  
17

18 IN WITNESS WHEREOF, I have hereby  
set my hand on the 27th day of June, 2023.  
19

20 s/Jeremy Frank  
21 JEREMY FRANK, MPM  
22  
23  
24  
25

360

1 \*\*\* ERRATA SHEET \*\*\*  
2  
3 NAME OF CASE: FTC VS. MATCH  
4 DATE OF DEPOSITION: June 22, 2023  
5 NAME OF WITNESS: SARAPH  
6 PAGE LINE FROM TO  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

DUSHYANT SARAPH  
Subscribed and sworn to before me  
this \_\_\_\_\_ day of \_\_\_\_\_, 2023.

JEREMY FRANK My Commission Expires:

90 (Pages 357 to 360)



# MIME



the masters in immersive mediated environments ... play the future

[About](#)

[Program](#)

[Faculty](#)

[Mimesters](#)

[Gallery](#)

[Apply](#)

[What we like](#)



Misha W. Vaughan, principal usability engineer at Oracle Corporation leads usability of entertainment workshop for Mimesters [... more ...](#)



Alex, so what is it you do? [... more](#)

Melissa Federoff is the internet content specialist for the Marketing Department of LucasArts Entertainment Company, where she is responsible for the management of content for the company web site. [... more](#)



Random Mime image

**MIME**....is about art, music and storytelling designed for New Media, along with every media ever invented or used by humankind....from cave wall etchings to Gibson's stimsims and virtual light. We strive to meld the digital with the traditional, be it film, radio, television, print, or any other medium. MIME recognizes that the explosion in digital convergence has come from applying human talent and imagination to technology. We therefore look to bringing

content and creativity, whatever form they take, to digital and virtual platforms, resulting in New Media products that cover the gamut from computer games and internet development to virtual reality environments.

**MIME** brings together teaching and research from across Indiana University to investigate the social and cultural roles of new media and to engage in the development of new media for entertainment, learning, commerce and communication. MIME couples intensive classroom study with an internship program that allows students direct experience with corporate and public users and designers of these new media. MIME focuses on the synergy of practical skills and study needed to successfully create, evaluate and critique new media environments of all sorts.

## T605: Usability engineering for entertainment applications

Department of Telecommunications at Indiana University in Bloomington

Section: 9182



Instructor: Misha W. Vaughan, Ph.D., misha.vaughan@oracle.com

Principal Usability Engineer

Usability and Interface Design Group

Oracle Corporation

Misha W. Vaughan is a Principal Usability Engineer at Oracle Corporation leading the usability engineering for Customer Relationship Management (CRM) software. She has been intimately involved in the usability engineering lifecycle for Oracle's ERP, CRM, and Business Intelligence software. Her experience includes usability consulting for AT&T, Ameritech, NCR, and publications in the Journal for the American Society of Information Science, Communications of the ACM, New Media & Society, and the International Journal of Human Computer Interaction. Her background includes a Ph.D. in Information Science with a specialization in Human-Computer Interaction, and a Masters degree in Telecommunications, both from Indiana University at Bloomington.

### Abstract

This is a two-day workshop: Feb 22-23

Learning objectives of the tutorial

- To understand the role of usability engineering in the product development lifecycle
- To articulate the strengths and weaknesses of different usability engineering methods
- To appreciate the organizational challenges when introducing usability activities
- To define a program of usability engineering activities for a given product

### The assumed background of attendees

No prior knowledge in usability engineering or human-computer interaction is expected. However, some prior exposure to these concepts will benefit students. It is expected that students will be coming from product development backgrounds, i.e., programming, business, interaction design.

### Detail of the material that will be covered in the course

1. 1. Usability engineering in the product development lifecycle This section will connect the usability engineering lifecycle of software to the product development process. We will cover four general stages of definition and development, and the usability activities most associated with those stages.

1. Concept - User Requirements: Wants & Needs Analysis, Task Analysis, Focus Groups, Card Sorting, Competitive UI analysis, Observation, Questionnaires
2. Design - User Evaluations: Prototype testing, Low-fidelity, high fidelity, Heuristic Evaluation
3. Evaluation – Formal Usability Testing
4. Distribution – Post-release observation, Post-release questionnaires + interviews, Usability testing

2. Strengths and weaknesses of different usability engineering methods As we cover the product development stages and the associated usability methods, students will be exposed to the various strengths and weaknesses of each method. Students will learn about key themes within usability engineering against which they can evaluate given methods:

1. Ethics (Consent, Non-Disclosure)
2. User definition
3. Task definition
4. Scope / Generalizability

5. Resources (time, money, facilities)
6. Data quality / interpreting the results
7. Presenting / Reporting

3. Organizational challenges Students will be exposed to the variety of interpersonal, departmental, and organizational challenges associated with usability activities. They will be taken through case studies of organizations of various sizes and how usability is handled.
  1. buy-in from stakeholders
  2. Collaboration & relationship building
  3. Conducting the study (funding, costs, facilities)
  4. Tracking changes / product improvement
4. Developing a usability engineering plan for a given product Students will be asked to apply the above knowledge to developing a usability plan for their own product. They will be expected to articulate usability activities at each stage of their product development, and the reasons for choosing those methods. They will be able to defend the selection of methods, and the data quality resulting from these methods.

## How the tutorial will be conducted

The course will be a combination of lectures, followed by hands-on demos, exercises, and case studies. Need to do reading first, then exercises, then follow-up with lecture.

### Readings: Selected chapters from:

- McConnell, S. Software Project Survival Guide. 1998 Microsoft Press.
- Nielsen, J. Usability Engineering. 1994.
- Preece, Rogers, Sharp. Interaction Design. 2002. Wiley & Sons, Inc.
- Dumas, J. S. & Redish. J. C. A Practical Guide to Usability Testing. Intellect. 1999.
- Wood, L. E., User Interface Design: Bridging the gap from user requirements to design. 1998. CRC Press.
- New Media in Society Article
- M. Federoff's thesis

## Grades

1. Pre-plan documentation -- Prior to the course students will document and communicate to the instructor the following: product definition, user profiles, tasks, time frame, and competitors.
2. Attendance – Attendance at the 2-day, in-person lecture series is mandatory.
3. Usability Plan – Students will write up a usability plan for their/a product. It will include a detailed description of one user requirements gathering activity and one evaluation activity.

## Schedule of events

### Prior to Day 1

- Students will have mailed or emailed pre-plan documentation to the instructor
- Students will have read the associated course material

## Day 1

8:30 – 9:00 Welcome and Introduction

- Subject matter, purpose/goal, learning objectives and takeaway value of course
- Instructor & student backgrounds
- Audience, schedule/presentation format, and handouts
- Product development lifecycle (new products vs. existing products)

Recommended reading: McConnell, S. Software Project Survival Guide. 1998 Microsoft Press.

9:00 – 9:30 1st Demonstration of Requirements Gathering – Wants & Needs Analysis

9:30 – 10:00 Discussion

- Method
- Pros & Cons
- Product development lifecycle

Break

10:00 – 10:30 2nd Demonstration of Requirements Gathering – Group Task Analysis

Recommended reading: Larry Wood, at least the Bridge chapter by Tom Dayton

10:30 – 11:00 Discussion

- Method
- Pros & Cons
- Product development lifecycle

11:00 – 11:30 3rd Demonstration of Requirements Gathering – Focus Group + Questionnaire

11:30 – 12:00 Discussion

- Method
- Pros & Cons
- Product development lifecycle

Recommended reading: focus groups

12:00 – 1:00 <Working> Lunch w/ Dr. Misha

1:00 – 1:30 4th Demonstration of Requirements Gathering – Card Sorting

Recommended readings: HoosierNet article, Shirley Martin article

1:30 – 2:00 Discussion

- Method
- Pros & Cons
- Product development lifecycle

2:00 - 2:30 5th Demonstration of Requirements Gathering – Interviews & Observation

Recommended reading: New media and society article

2:30 – 3:00 Discussion

- Method
- Pros & Cons
- Product development lifecycle

3:00 – 3:30 Other Things You Do Early on

- Competitive UI Analyses
- Documentation

3:30 - 4:30 Usability Engineering Themes

- Ethics (Consent, Non-Disclosure)
- User definition
- Task definition
- Scope / Generalizability
- Resources (time, money, facilities)
- Data quality / interpreting the results
- Presenting / Reporting

4:30 – 5:00 Working Time / Questions

## Day 2

8:30 – 9:00 Welcome and Introduction

- Questions and comments from the day before
- Schedule for the day
- Usability Engineering Dos and Don'ts
- Product development lifecycle

9:00 – 9:30 1st Demonstration of Evaluation – Heuristic Evaluation

Recommended Reading: Federoff, M. Thesis, Nielsen's heuristics

9:30 – 10:00 Discussion

- Method
- Pros & Cons
- Product development lifecycle

Break

10:00 – 10:30 2nd Demonstration of Evaluation – User Evaluation/Prototype Testing

Recommended reading: Dumas and Redish

10:30 – 11:00 Discussion

- Method
- Pros & Cons
- Product development lifecycle

11:00 – 11:30 3rd Demonstration of Evaluation – Formal Usability Testing

11:30 – 12:00 Discussion

- Method
- Pros & Cons
- Product development lifecycle

12:00 – 1:00 <Working> Lunch w/ Dr. Misha

- Observation
- Interviews + Questionnaires
- Post-release testing

1:30 – 2:30 Organizational Challenges

- Getting buy-in from stakeholders
- Collaboration & relationship building
- Conducting the study (funding, costs, facilities)
- Tracking changes / product improvement
- Usability paranoia

2:30 – 3:00 Developing a Usability Engineering Plan - Presentations

Break

3:00 – 4:30 Developing a Usability Engineering Plan - Presentations

4:30 – 5:00 Final Comments

- Usability Engineering as 'course corrections'
- Usability Engineering as a parallel activity
- Usability Engineering as a humble activity

## After Day 2

1-2 weeks after completing the in-person lecture component of the course, students will be asked to turn in a usability plan for their/a product.

## Material Requirements

An LCD projector will be required as part of the lectures and hands-on demonstrations. Easel, 3M Easel Pads, white board, markers, multi-colored sticky notes, computer lab.

# Instructors



## Preston McCauley

Preston McCauley's distinguished career spans 20 years in the UX industry, affording him with unique industry knowledge through the entire life cycle. Preston's insights identify problems and opportunities to maximize successful implementation. As a member of the Dallas-Fort Worth User Experience Professional Association (UXPA), Preston is a frequent featured speaker at events and a mentor to peers and rising UX professionals. Preston's specialties include business UX strategy, UX ideation, UX research, and design. He prides himself on keeping a daily pulse on the UX design world like no one else.

User Experience Design and Process Strategy

UX Principles & Concepts in Augmented Reality, Virtual Reality and Holograms

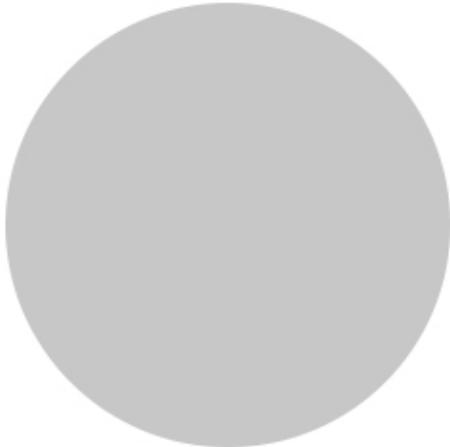


## Elisa Kaplan Miller

Elisa Kaplan Miller is an enterprise UX thought leader who focuses on Agile/SAFe integration and other issues in A long-time user advocate and audience detective, she is a passionate user experience architect and user research user experience research, content strategy, information architecture, and technical training across a variety of disc healthcare, energy, semiconductors and high tech. Elisa integrates her strategic approach with a business perspective business, marketing and technology.

Usability Testing

Design for Accessibility



**PHOTO  
COMING  
SOON**

## Crispin Reedy

Crispin Reedy is a Voice User Experience designer and usability professional with over 10 years of front-line design decisions across a variety of industries, including financial, telecommunications, health care and transportation. She is interested in how we can best leverage real-world data to achieve those goals. Crispin speaks at a number of professional conferences and currently serves as President of the Association for Voice Interaction Design.

Experience Design & Branding on Voice-Enabled Devices



## J Schuh

J Schuh is an Adobe Community Professional with a passion for teaching creativity and Adobe products. In addition to Collin College and Texas A&M Commerce, J is an award-winning animator, cartoonist, designer and motion graphic developer, developing compelling interactive design and video content for Fortune 500 companies. He is a national conference speaker at the *BRILLIANCE: Understanding the Creative Mind*.

Introduction to User Experience Design

Hands-on Design Thinking

Designing a Killer UX Portfolio to Get You Hired





## Brandon Ward

Brandon's passion for experience and service design combines a background in the arts and an interest in interactive games. He currently serves as Director of User Experience at Precocity. An artsy kid with bachelor's degrees in visual arts and theater, Brandon now enjoys leading teams to create user-friendly solutions to help people. He has developed a particular interest in game development, design, business, and the customer.

Experience and Service Design

Apply

Financial Aid Info

Get Started

### USER EXPERIENCE DESIGN CERTIFICATE

Program Details

Courses

Instructors

Tuition and Financial Aid

**Usability.gov is archived and no longer updated**External links may not function and information on the site may be out of date. Visit [digital.gov](#) for current information.

## Interaction Design Basics

Interaction design focuses on creating engaging interfaces with well thought out behaviors. Understanding how users and technology communicate with each other is fundamental to this field. With this understanding, you can anticipate how someone might interact with the system, fix problems early, as well as invent new ways of doing things.

### Best Practices for Designing Interactions

Consider these qualities and associated questions when creating digital products that have an interactive element:

Questions to Consider when Designing for Interaction	
Define How Users Can Interact with the Interface	<ul style="list-style-type: none"> <li><b>What can a user do with their mouse, finger, or stylus to directly interact with the interface?</b> This includes pushing buttons, dragging and dropping across the interface, etc.</li> <li><b>What commands can a user give, that aren't directly a part of the product, to interact with it?</b> An example of an “indirect manipulation” is when a user hits “Ctrl+C”, they expect to be able to copy a piece of content.</li> </ul>
Give Users Clues about Behavior before Actions are Taken	<ul style="list-style-type: none"> <li><b>What about the appearance (color, shape, size, etc) gives the user a clue about how it may function?</b> These help the user understand how it can be used.</li> <li><b>What information do you provide to let a user know what will happen before they perform an action?</b> These tell users what will happen if they decide to move forward with their action. This can include meaningful label on a button, instructions before a final submission, etc.</li> </ul>
Anticipate and Mitigate Errors	<ul style="list-style-type: none"> <li><b>Are there constraints put in place to help prevent errors?</b> The Poka-Yoke Principle says that placing these constraints forces the user to adjust behavior in order to move forward with their intended action.</li> <li><b>Do error messages provide a way for the user to correct the problem or explain why the error occurred?</b> Helpful error messages provide solutions and context.</li> </ul>
Consider System Feedback and Response Time	<ul style="list-style-type: none"> <li><b>What feedback does a user get once an action is performed?</b> When a user engages and performs an action, the system needs to respond to acknowledge the action and to let the user know what it is doing.</li> <li><b>How long between an action and a product's response time?</b> Responsiveness (latency) can be characterized at four levels: immediate (less than 0.1 second), stammer (0.1-1 second), interruption (1-10 seconds), and disruption (more than 10 seconds).</li> </ul>
Strategically Think about Each Elements	<ul style="list-style-type: none"> <li><b>Are the interface elements a reasonable size to interact with?</b> Fitts' Law says that <a href="#">elements</a>, such as buttons, need to be big enough for a user to be able to click it. This is particularly important in a mobile context that likely includes a touch component.</li> <li><b>Are edges and corners strategically being used to locate interactive elements like menus?</b> Fitts' Law also states that since the edge provides a boundary that the mouse or finger cannot go beyond, it tends to be a good location for menus and buttons.</li> <li><b>Are you following standards?</b> Users have an understanding of how interface elements are supposed to function. You should only depart from the standards if a new way improves upon the old.</li> </ul>
Simplify for Learnability	<ul style="list-style-type: none"> <li><b>Is information chunked into seven (plus or minus two) items at a time?</b> George Miller found that people are only able to keep five to nine items in the short-term memory before they forgot or had errors.</li> <li><b>Is the user's end simplified as much as possible?</b> Tesler's Law of Conservation notes that you need to try to remove complexity as much as possible from the user and instead build the system to take it into account. With that said, he also notes to keep in mind that things can only be simplified to a certain point before they no longer function.</li> <li><b>Are familiar formats used?</b> Hick's Law states that decision time is affected by how familiar a format is for a user to follow, how familiar they are with the choices, and the number of choice they need to decide between.</li> </ul>

## References

- *Designing for Interaction: Creating Innovative Applications and Devices* (2nd Edition) by Dan Saffer.
- *Information Architecture for the World Wide Web: Designing Large-Scale Web Sites* by Peter Morville and Louis Rosenfeld.
- [Complete Beginner's Guide to Interaction Design](#)
- [Introducing Interaction Design](#)